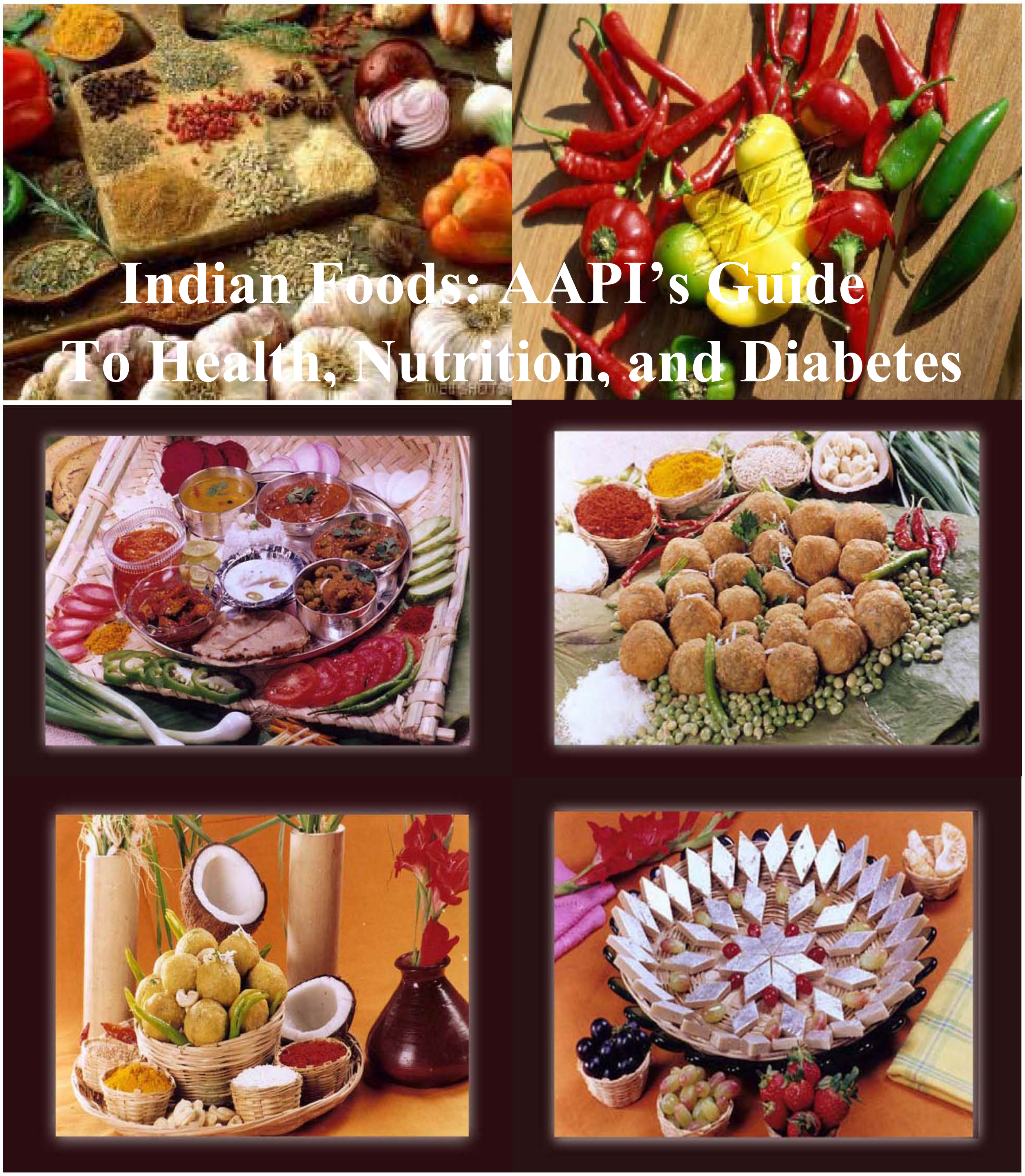
Indian Foods: AAPI's Guide To Health, Nutrition, and Diabetes



Photographs by Amish Thakkar; Cover page designed by Ranjita Misra

Indian Foods: AAPI's Guide To Nutrition, Health and Diabetes

By

The Subcommittee of the Public Health Committee of AAPI

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PREFACE

This booklet is prepared by an enthusiastic and dedicated group of dietitians as a community service to the Indian Americans. The whole concept came up in my role as the chairman of the Public Health Committee of the American Association of Physicians of Indian Origin (AAPI) as a service to the community. I wanted to do this project and spoke to my sister-in-law Bansari Patel who is a registered dietitian and she introduced me to Rita Batheja also a registered dietitian and founder of the Indian American Dietetic Association (IADA). Rita as the co-chair and Padmini Balagopal as the chair got a team of writers and reviewers together. You, the reader will find the booklet brings together extra details and reference material on the subject of Indian cuisine and the management of diabetes. As you know India is a diverse country with hundreds and thousands of different foods. It is hoped that this booklet will help you understand the Indian cuisine and the concept of food exchanges so that with healthy eating, this cuisine can be enjoyed as much as it should be. This booklet has been sponsored as a guide to the community from AAPI. The President of AAPI, Dr. S. 'Jay' Jayasankar has been very helpful and instrumental in supporting this booklet and also with its free distribution (as long as the funding for this project lasts)

So, Bon Apetit!

T.G.Patel, MD, MACP
Chairman, Public Health Committee
AAPI

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Finally, Padmini Balagopal for the monumental task of getting the booklets printed in India and coordinating with Rita (Shah) Batheja to complete the project.

T. G. Patel, MD, MACP

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FOREWORD

"Tell me what you eat, and I shall tell you what you are"
Anthelme Brillat-Savarin

So many people ask me, "Why doesn't the AAPI make available nutrition value information of Indian foods, so we can eat right." The epidemic of diabetes and heart disease amongst us prods us to a healthy diet. The threshold levels of food groups and benefits and risks are undergoing constant refinement. Bewildering is the variety of Indian cuisine and scant is the nutritional analysis available.

So, when Dr. Thakor G. Patel, the Chair of the Public Health Committee offered to create this book, it was indeed a godsend. Thanks to the Herculean efforts by Dr. Patel, the outstanding task force and its chairs, Padmini Balagopal and Rita Batheja, and many others, here it is. I know everyone will want it for their kitchen. We hope to get enough sponsorship to make this available free widely.

This book complements the AAPI's public health efforts in preventing the twin menaces of diabetes and heart disease among Indians as also, osteoporosis. Diet and activities are so central in all these conditions. As the leading ethnic medical society in the US and the standard bearer for the over 35,000 physician and 10,000 medical student and resident constituents (which is 1 out of 20 physicians and 1 out of 8 medical students in the US) and the nearly 1.7 million strong Indian American community and an effective Ambassador of India on this soil, the AAPI is proud to be of service.

S. Jayasankar

S. 'Jay' Jayasankar, MD,
June 2002, Boston.
President, AAPI
American Association of Physicians of Indian Origin

INTRODUCTION

Since 1965 more than a million Indians have immigrated to the United States from the Asian sub-continent of India. Recent census report that their numbers have increased from 815,447 in 1980 to 1.6 million in 2000. Currently the community is ranked the third largest Asian American group in the United States after the Chinese and Filipinos. Thirty-five percent of the community lives in the North Eastern United States followed by 24% in the South, 23.1% in the West and 17.9% in the Mid-West. Indians make up approximately 2% of the population individually in the states of New Jersey, New York, California and Illinois. The community consists of academic and technical professionals, individuals who own and/or work in commercial establishments and dependents (spouses, children, siblings and elderly parents who visit from India for extended periods of time.

The Indian community is diverse with regard to the region of origin in India and the religions they practice. India can be divided into four major regions-North, South, East and West. Each region has its distinctive language, dialects, customs and food practices. Hinduism is the predominant religion practiced by Indians followed by Islam, Buddhism, Jainism, Sikhism, Zorastrainism, Christianity and Judaism. The followers of these different religions observe different dietary laws and codes for fasting, and feasting thereby influencing their eating patterns. Throughout history, the culture and cuisines of India have been influenced by other civilizations such as the Moghuls, the British and now the Americans. The neighboring nations of Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka on all four frontiers share many common features with regard to dietary habits and food practices despite their unique food specialities.

Health problems and nutritional status of Indians in the US

Some of the important health problems faced by Indian immigrants include chronic degenerative diseases such as diabetes, hypertension, cardio-vascular disease and complications arising from any of these conditions. In fact, Indian immigrants have a significantly higher risk of cardiovascular disease with heart disease rates estimated to be one and one half to four times greater than Whites. Research has shown that there is a susceptibility among us towards developing non-insulin dependent Type 2 diabetes. There are several reasons for this. Hereditary differences in lipid metabolism, excessive insulin resistance, increased glucose tolerance, increased abdominal fat, lifestyle changes such as lowered physical activity coupled with increasing stress are thought to enhance the risks for such diseases. Concerns also center around nutrition problems stemming from dietary changes such as altered vegetarian status, meal patterns, increased usage of fast and convenience foods, changes in the frequency of use of traditional Indian foods and the inclusion of other ethnic and American foods as substitutes for traditional foods. This results in the abandonment of a diet traditionally high in complex carbohydrates and low in fat to a diet that is high in saturated fat and animal protein and low in fiber.

What can you do?

Your nourishment does not depend on the selection of any one food. Instead it depends on the consistent and continuous selection of many different foods on a day to day basis. **There is a section in this book in the Summary that gives you suggestions on how to plan your eating and what to avoid.**

Purpose and organization of this booklet

In this book we have tried to present some practical guidelines for health professionals working with Indian clients and the clients themselves who wish to understand how to manage chronic disease conditions such as diabetes and cardiovascular disease.

In the first section we offer a primer on chronic degenerative diseases - their definitions, types and treatment modes.

In this booklet, we focus on the different regional cuisines of India. Within each region we provide background information to illuminate the cultural context from which the ethnic foods and food habits have evolved, popular dishes, meal patterns highlighting typical and modified meal patterns for clients with diabetes, tips for changes and suggestions for weekend and party planning and tips on how to modify a high-fat recipe into a more heart-healthy one. Every chapter talks about weekend eating as the two days of feasting and partying can undo many of the benefits of eating healthy throughout the week.

The section on food exchanges give you an idea of how much of a food item (like for example, a chapati) makes up a food exchange. The Glossary gives a list of some of the common foods and food items mentioned in the book as well as some of the more ingredients in this cuisine with its English equivalent.

Each section has been authored by a qualified professional in the field of nutrition (you will find a brief write-up of the writer at the end of each chapter) and has been further reviewed by qualified nutrition and medical professionals (listed on the inside of the cover page).

SECTION 1

Diabetes

Diabetes is a disease characterized by high blood glucose and either insufficient or ineffective insulin, depending on the type of diabetes.

Type 1 diabetes also known as insulin dependent diabetes or juvenile onset diabetes, occurs around the ages of 8 to 12 years but can occur at any age. The disease has a strong genetic link. The pancreas cannot synthesize insulin thereby altering the body's metabolism. The person must be injected with insulin to assist the cells in taking up the needed fuels from the blood.

Certain parameters like body measurements (BMI or Body Mass Index>25) can put a person at risk for developing diabetes if there is a genetic predisposition. Formula to calculate BMI: wt. in kg divided by (ht. in meters)^2 BMI reference table has been included here for your use. Another guide is the waist-to-hip ratio:

Waist divided by Hip = should not be > 1 in men

Waist divided by Hip = should not be > .8 in women

Type 2 diabetes is characterized by high blood glucose and insulin resistance. This disease usually begins after age 20. However the widespread incidence of inactivity and obesity in our population is being shown to precipitate this condition even earlier. The mean age of diagnosis in children and adolescents is approximately 13.5 years with a majority diagnosed in mid puberty. Youths with Type 2 diabetes have a BMI of 25 Kg/m. In the initial stages the pancreas produces insulin. The person may actually have higher than average insulin levels but the cells respond less sensitively to it either because they have diminished in number or in function thus making the individual insulin resistant. Consequently the blood glucose levels rise stimulating the pancreas to produce insulin, exhausting the cells and reducing their ability to function. In

obesity, the higher body fat necessitates higher insulin production; however, insulin receptors are reduced in number and function resulting in insulin resistance. Age, diet, lifestyle and genetic factors have been implicated in the development of the disease.

Symptoms of Diabetes include frequent urination, excessive thirst, extreme hunger, unusual weight loss, increased fatigue, irritability and blurred vision.

Criteria for diagnosis

- Symptoms of diabetes together with casual (any time of day) plasma glucose concentrations of > 200 mg/dl.
- Fasting plasma glucose (At least 8 hours following no caloric intake) > 126 /dl.
- Two hour plasma glucose > 200 mg/dl during an oral glucose tolerance test.

Criteria for Impaired Glucose levels

- **Fasting plasma glucose levels of < 126 mg/dl can be considered to be in the Impaired blood glucose range.**

Complications of diabetes

The accumulation of glucose in the blood leads to acute and chronic complications. Therefore early, aggressive treatment to control blood glucose significantly reduces the risk of long term diabetes related complications. Diabetes related complications include:

- diseases of large blood vessels such as atherosclerosis
- diseases of the small blood vessels resulting in loss of kidney function and retinal degeneration and blindness.
- diseases of the nerves resulting in loss of sensation, increased infections stemming from unnoticed injuries, and gastrointestinal problems.

Recommendations for Type1

Nutrition is an important part of the treatment regimen. Nutritional therapy focuses on maintaining optimal nutrition, educating clients about portion sizes, modifying recipes, controlling blood glucose and preventing and treating related complications. Focus is on meal intake patterns, consistency in carbohydrate intake to minimize glucose fluctuations.

Recommendations for Type 2

- Calories should be prescribed to maintain a reasonable body weight.
- Protein intake is recommended at 10-20% of caloric intake with a focus on lean meats, poultry, fish and the use of beans and cereal lentil combinations.
- Total fat and cholesterol intakes have to be tailored to meet individual requirements based on lipid profiles.
- Diet is designed to maintain consistent and evenly spaced carbohydrate intake throughout the day. In this respect carbohydrate counting and exchange lists as well the use of complex carbohydrates will help.
- Salt intake should be reduced in clients with hypertension.
- Persons with diabetes with elevated lipid levels need to monitor their fat intake as well.

Sudha Raj PhD RD is an Assistant Professor in the Department of Nutrition and Hospitality Management in the College for Human Services and Health Professions at Syracuse University in Syracuse New York.

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CAN NUTRITION AND EXERCISE IMPROVE CHOLESTEROL AND TRIGLYCERIDE AND PREVENT HEART DISEASE IN INDIANS?

A significant rise in heart disease among Indians could be due to inappropriate dietary habits and a lack of exercise. Some children may also be at a higher risk for developing dyslipidemia (high triglycerides and high LDL cholesterol).

Dyslipidemia defined as high cholesterol and/or high triglyceride can be lowered with a healthful diet. Indians may have a condition called insulin resistance or "metabolic syndrome". The primary cause of an increase in heart disease in Indians is due to the metabolic syndrome described as high triglyceride levels and low HDL (good cholesterol) levels. These levels are also associated with upper body (waist) obesity and high insulin levels in the blood. Metabolic syndrome includes dyslipidemia (high triglyceride levels, small LDL particles or pattern B, and low HDL levels), high blood pressure, a moderate increase in blood sugar or diabetes. Accompanied by a small weight loss (if overweight), consistent daily aerobic exercise for a minimum of 30 minutes to an hour e.g. walking can increase the good HDL cholesterol and lower triglyceride, lower blood pressure and lower blood sugar. In fact life style changes including exercise and weight loss (if overweight) can reverse insulin resistance and the metabolic syndrome in many people. The question we should ask is not whether one should exercise. The question we should be asking is whether we can afford NOT to exercise. A high level of homocysteine and lipoprotein (a) are also risk factors for heart disease. Ask your doctor if you should have these blood tests.

Lowering your triglyceride levels

Triglycerides are the blood fats strongly associated with diet and weight. Being overweight, excessive sweets consumption and excessive alcohol intake can increase the triglyceride levels in the blood. The best level of triglyceride is 150 mg/dl or less, however, some lab slips indicate levels up to 250 mg/dl as normal. An increase in triglycerides can suggest changes in the lipoprotein patterns that are not healthy. This unhealthy change is referred to as Pattern B. Eating a high carbohydrate diet can cause triglycerides to increase. Both what you eat and the amount of food you eat can change triglyceride levels. If your overeating causes you to gain weight this will also raise your triglyceride. Alcohol can also increase triglyceride levels in the blood. Eating fatty fish e.g. salmon, mackerel and trout once or twice a week may help lower triglycerides as these are high in omega-3 fattty acids. Flax seeds may also be beneficial on a heart healthy diet although they do not have the two essential fatty acids EPA & DHA that fish does.

Fitting Fats and Oils into your daily diet

Fat is an important nutrient because the body cannot produce its own and must get it from the diet. A low fat diet accompanied by weight reduction will lower triglycerides. Eating too little fat but enough food to maintain your weight usually results in your triglycerides going up and your HDL going down. Although your triglyceride may stay in the lab normal range (<150 mg/dl) you do not want your triglyceride to go over 100 mg/dl. If your triglyceride levels go above 100 mg/dl your HDL will usually go down. Obviously, you do not want to do anything to lower your HDL. A healthy HDL for men is at least 45 mg/dl and for women is 55 mg/dl. Sometimes, reducing your fat intake will allow you to lose some weight. During active weight loss, HDL is reduced.

Moderation - the key to a healthful diet

The appropriate diet you should eat to lower your triglycerides is one that is moderate in fat. A typical woman can daily consume 3-4 Tablespoons (45-50 g/day) **of oils/fats** and a typical man 5-6 Tablespoons **of oils/fats**(75 g/day), but the fat should be primarily from monounsaturated sources. Monounsaturated fats are the fats found in olive oil and canola oil. Avoid foods made with saturated fat (fat that is solid at room temperature). To reduce the LDL (bad) cholesterol in your blood, saturated fat and dietary cholesterol should be reduced in the diet. Saturated fats have the most dramatic effect on raising LDL cholesterol. These are butter, ghee, lard, shortening, coconut and the fat in meat including chicken. They are solid at room temperature. They are also found in baked goods (pastries, kulfi, rasmalai, pies, cakes and cookies) and prepared foods made with these fats such as in restaurants (fried appetizers, marinated entrees, butter and cream based sauces). To lower your cholesterol you would choose as little saturated fat as possible and lose weight if you are overweight.

All fats are not created equal

You can eat other types of fat. It is simply not true that "no fat in the diet is better than any fat in the diet". One type of fat that is thought to be "good" is called monounsaturated fat. This is the type of fat in olives and olive oil, canola oil and peanut oil. By using canola and olive oil in food preparation you can improve your cholesterol levels. If you have a weight problem you will want to limit the intake of all oils including the monounsaturated oils. You can use these in cooking and on food such as salad dressings. There are a few margarines and mayonnaises made with monounsaturated fat. Read your labels carefully looking for canola or olive oil or that list more of these (monounsaturated fat) than other fats on the label. The new margarines made from plant cholesterol e.g. "Benecol" and "Take Control" can also lower LDL cholesterol levels.

Vegetarian alternatives including use of Soy

Tofu is an excellent choice for protein especially in place of "Paneer". Unlike "Paneer" which is high in saturated fat, the fat in tofu is preferable to unsaturated fat. Legumes (dried beans and lentils) including "daal" are naturally low in fat, high in protein and carbohydrate and in fiber. Soy milk like tofu is available in low fat varieties. Soy milk usually has a beany after taste which most people find quite pleasant. Try using soy milk with fresh fruit to make delicious smoothies. Soy yogurt and soy cheese is available. Check the fat content as these can be high in fat. One egg three times per week is quite acceptable in an otherwise low fat diet. Nuts and seeds, avocados and olives are considered good fats because they are high in monounsaturated (good) fat. Be aware that these good fats are also high in calories and can cause a weight problem. Vegetarian burger patties can be convenient and nutritious alternative to the meat patties. Two or three servings (2 or 3 oz each) of protein foods and two or three servings (8 fl oz) of low fat or non fat milk or buttermilk or yogurt is recommended daily. Also recommended are 6 to 11 servings of grains and 5 servings of fruits and vegetables daily. Use of whole milk in the preparation of "chai" and desserts during the Hindu festivals e.g.'peda' can add saturated fat in the diet. Though such items can be worked into occasional use on an exchange basis, they can contribute to high cholesterol and/or high triglyceride levels.

For more information

A registered dietitian can help you develop a customized meal plan while taking your personal food preferences and medical history and lab reports into account. This is referred to as medical nutrition therapy (MNT) by a registered dietitian (RD).

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NORTH INDIAN CUISINE

North Indian cuisine typically represents foods of Punjab, Delhi, Uttar Pradesh, and Rajasthan area. All the states north of Maharashtra are often clumped together in this generalization. Each state has its own specialties but it is the similarities that classify the food of this region. North Indian food is often called "Punjabi food". North Indian food is the most popular food in restaurants and is often understood to represent Indian food.

Wheat is the staple food of this region. "Basmati" rice is grown in the northern plains and is often the rice of choice for pulaos and biriyanis. Variety of dals or beans such as garbanzo, kidney, urad as well as moong and toor dal are used. Milk, butter and ghee are used extensively. Chicken and mutton are the most popular meats eaten in this region. Most of the cooking is done on the stovetop using the roasting and frying method.

Punjabis popularized tandoori food (that gets its name from the *tandoor* clay oven in which the food is cooked) in this region. Today most Indian restaurants around the world serve tandoori dishes and typically Punjabi food.

North Indian food is a mix of simple to very elegant vegetarian and non-vegetarian fare. A simple vegetarian meal may consist of moong dal, subji and phulka (thin fat-less roti). The food is seasoned with asafoetida, cumin, turmeric, coriander powder and garam masala. Other Indians often refer to Garam masala as a north Indian spice blend. Onion and garlic may or may not be used. Then there are the non-vegetarian favorites like chicken and lamb dishes heavily seasoned with spices, onion, ginger and garlic. Foods like stuffed parathas, saag and makki ki roti, chole and bhature, kofte, rogan josh, tandoori chicken, biriyanies and pulao's are very popular here. North Indian desserts like barfies, laddus, and gulab jamun are extremely popular throughout India.

North Indian food is often described as "rich". The food is often fried, and a fair amount of ghee, butter and nuts may be is used. The food is seasoned heavily with onion, ginger, garlic and spices like cardamom, cinnamon and cloves that give the food a "rich" color and flavor.

Nutritionally speaking north Indian meals with plenty of whole grains, green vegetables, beans and lean meats (poultry without skin) are high in complex carbohydrates, fiber, vitamins and minerals. The overall fat and saturated fat content of traditional meals may be high due to extensive use of milk, butter, ghee and oil. This is where the meals can be modified in fat content by using small amount of oil to season the food. Also substitute low fat or fat free milk wherever possible and use butter and ghee sparingly.

North Indian food can be easily incorporated in a healthy lifestyle. If you have diabetes it is important to watch the carbohydrate content of each meal. Plan balanced meals of roti, dal, meat (if non-vegetarian) non-starchy vegetables and salad. A typical 'thaali' meal (pre-portioned out foods in small cups served on a large plate or 'thaali') with balance of nutrients, flavors and textures may work well with diabetes and a healthy diet. The amount of carbohydrate in each meal is individualized based on needs. Portion size of foods is important to determine the actual carbohydrate intake. Remember within reason most foods can fit into a diet for a person managing his/her diabetes. See sample menu below.

Sample Menu

A sample menu of a typical vegetarian and non-vegetarian meal with an improved sample of the same is given below. A typical meal as mentioned earlier is high in carbohydrate and fat. By some modification in the amount of oil and ghee used, substituting low fat and low

carbohydrate vegetables as well as cutting down on portions will help in cutting down in carbohydrate and fat content and therefore the total calorie intake. Consult a dietitian for an individualized meal plan.

Typical Vegetarian Meal with Non-vegetarian options

Breakfast	1 cup Chai (Tea) with whole milk 3 teaspoon sugar 2 Potato Parathas Pickle
Lunch	2 Roti with 2 teaspoons ghee 1 cup Rajmah (orChicken Curry) 1 cup spinach and potato subji 1 cup rice ½ cup Dahi (whole milk yogurt) Onion and Cucumber salad 1 Roasted Papad (4 teaspoon vegetable oil in cooking)
Tea Time	1 cup Chai with whole milk 3 tsp regular sugar 1 cup Namkeen (fried snack) 1 Laddu (sweet)
Dinner	4 Parathas (8-10 tsp oil) (1 cup Kheema) 1-2 cups potato and pea subji ½ cup Dahi (whole milk yogurt)
Snack	1 ½ cups Kheer

Above menu modified to yield a lower range of fats and carbohydrates

Breakfast	1 cup Chai with skim milk no calorie sweetener 2 Whole wheat toast 1 teaspoon margarine 1 cup skim milk
Lunch	2 Roti-no ghee 1 cup low fat Rajmah (or low fat Chicken Curry) 1 cup spinach subji ½ cup rice ½ cup Dahi (fat free yogurt) Onion and cucumber salad 1 Roasted Papad (2 teaspoon vegetable oil in cooking)

Tea Time	1 cup Chai with skim milk no calorie sweetener ½ cup roasted Chana and Murmura 1 Banana
Dinner	3 Roti-no ghee ½ cup Chole (½ cup Kheema, low fat) 1 cup cauliflower subji ½ cup Dahi (fat free yogurt)
Snack	1 Orange 1 cup Skim milk

Weekends and Parties

There is often a distinct difference in our eating between weekdays and weekends. On weekdays we are bound by time and schedules and it is easier to control the types and amounts of foods we eat. People will often say they do so well Monday to Friday implying that they make good choices in their meal selection. But come weekends (starting Friday night) we lose all restraints in our food selection. Indians love to party, as it is our way of socializing and connecting with our culture. Socializing is associated with special occasion foods of puri, chole, pakore, and not to mention kheer and halwa (generally high-fat foods). Portion control is a good tool to use here. If you are the host, plan your parties to balance meals and incorporate some lower fat foods like vegetable trays as appetizers and use less fat in your dishes. If you are the guest at a party and everything you see is high in fat and calories watch your portion sizes, enjoy the company and thank the hosts for a wonderful evening. You will be much happier on Monday morning!

Typical Party Menu

Samose or pakore with chutney

Puri

Chole

Chicken curry (non-vegetarian)

Potato Pea subji

Cauliflower with potato subji

Kofta

Onion, cucumber, radish salad

Boondi Raita

Matar Pulao

Chai

Gulab Jamun

Suggestions for person with diabetes

(Remember you have to watch your total carbohydrate intake to avoid elevated blood sugar after the meal)

1 Samosa

1 Puri

½ cup Chole
½ cup Chicken curry (non-vegetarian)
½ cup Cauliflower subji, avoid the potatoes
1 kofta
1 cup onion, cucumber, radish salad
¼ cup Raita
½ cup Matar Pulao
Chai
Avoid dessert if the main meal was too heavy or exercise portion control

North Indian Cuisine

Eat More Often	***Avoid or Eat less often***
STARCHES	
Roti	Paratha, puri, kachori, naan
Plain Rice	Pulao, Biriyani
Potatoes-prepared with minimal oil	Fried potatoes
FRUITS	
All fresh fruits Light canned fruit	Monitor portion size of fruit Regular canned fruit
VEGETABLES	
All vegetables cooked with minimal oil	Creamed or fried vegetables
MEAT AND ALTERNATIVES	
Eat dal, chicken and fish cooked in minimal oil	Fried or creamed dal or meat
	Eat lean lamb, goat, pork or beef less often and small quantity
Low fat paneer Part skim Ricotta cheese	Regular paneer Regular Ricotta Cheese
DAIRY	
Skim milk, fat free yogurt and buttermilk	2% or whole milk and its products
FATS	
Margarine Oil	Butter, ghee, cream and half half
Almonds, peanuts, walnuts	Coconut

Madhu Gadia, MS, RD, CDE (Registered Dietitian and a Certified Diabetes Educator). lives in Ames, Iowa and work at an outpatient clinic. Author of Lite and Luscious Cuisine of India: Recipes and tips for healthy and quick meals and New Indian Home Cooking. She also teaches Indian cooking around the country. For more information see http://www.cuisineofindia.com or call 515-292-7170 or email me at mgadia@cuisineofindia.com.

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NEPALI CUISINE

Nepali cuisine is mostly influenced by cooking practices in North India and Tibet. But, there are many dishes that are derived from the Newari ethnic group who are native to Kathmandu, the capital city of Nepal. This article has been written, keeping in mind, the people of Nepalese origin living or having lived in the plains where the resources are not as limited as in the higher mountainous regions.

In general, Nepali meals include one or more of the following in varied forms:

- Rice, wheat and maize are not as popular as rice. Even less popular are millet, barley and buckwheat
- Dals or legumes of various kinds. Most common *dals* are toor, urad, gram and mung. The two staples, namely rice and different *dals* are used in a variety of ways such as pounded, ground, fermented, boiled, sautéed and so on.
- Most commonly used animal protein foods are, chicken, mutton and eggs for non-vegetarians
- Green vegetables are stir-fried, while most other vegetables are seasoned with light spices and prepared in curry form.
- Fruits are usually consumed fresh or as juices
- Commonly consumed sweets are: *Kheer, Gulaab Jaamun, Halwa, Mahi* (by product of milk after the butter had been churned out, often sweetened before consumption), *Rasogolla, Rasmalai, Laddoos* etc.
- Tea is most popular drink for all seasons. It is served with milk and sugar.
- Ghee or clarified butter is often served with rice and flavor enhancer. Mustard oil is mostly used for cooking.
- Water served with meals
- The most commonly used spices are coriander, cumin seeds, fenugreek, ginger, pepper (red, green, and black), turmeric, and other various combinations of these used as curry powders

Meal Pattern for the Traditional Nepali Client with Type 2 Diabetes

Time	Typical	Modified
Breakfast (7:00 AM)	1 cup tea with whole milk and sugar 2 slice bread 1 egg	1 cup tea with skim milk (or 1% fat milk) and with no sugar (preferable). 2 slices of whole-wheat bread/ toast. 2 tsp margarine
Snack/Lunch[1] (9:30 AM)		1 fruit, 3 graham crackers
Lunch/Snack (1:00 PM)	3 cups of rice 2 oz of meat/chicken 1 cup of *dal* 1 cup of stir-fried vegetables 2 table spoon of tomato/ coriander chutney Ghee, pickles	1 cup of brown rice ½ cup of *dal* 1 cup of vegetable curry 1 cup of stir-fried vegetables 2 oz of Chicken (skinless) or meat (white, lean) 1 cup low fat yogurt 2 table spoon of tomato or coriander chutney (fresh)
Afternoon tea and	1 cup of Chiura	½ cup Chiura or

[1] Nepalese following traditional meal time eat Lunch at about 9:00 AM and snack at 1:00 PM

snacks (4:00 PM)	(beaten rice) 1 cup fried vegetable 1 cup tea	3 saltine-type crackers or 10 unsalted roasted peanuts and 1 cup tea with low fat milk without sugar.
Dinner (7:00 PM)	3 cups of rice 1 cup of *dal* 3 oz of meat or Chicken 1 cup of stir-fried vegetables 1 cup of curry (mixed vegetable and chickpeas). Pickles	1 cup brown rice 1 cup stir-fried vegetables ½ cup mixed vegetables with chickpeas. 1 cup dhal or 3 oz of chicken or Fish ½ cup salad
Snack (9:00 PM)		1 fresh fruit 1 cup of skim milk

Tips for changes

1. Encourage brown rice instead of white rice.
2. Instead of using only rice, select from a variety of grains, such as cracked wheat, oats, and barley.
3. Avoid washing rice several times before cooking or cooking in excess water and draining. Doing this may lose valuable vitamins and enriched iron.
4. Keep in mind that the recommended portions are for the cooked product where applicable
5. Try to cook with minimum amount of oil. Preferably olive oil or canola oil which are high in monounsaturated fats.
6. While using potato, or other starchy vegetables, remember to cut down on the amount of rice eaten. Smarter thing to do is selecting a green vegetable more often than starchy ones.
7. Use green vegetables more freely and learn to cook them in a small amount of oil. Salads are good with any meal. Simple lemon or vinegar dressings may be freely used.
8. Switch over to skim or 1% low fat milk instead of whole milk. This will reduce the saturated fat content in the diet.
9. Avoid frying of snack foods; learn to look for recipes, requiring dry roasting, baking etc. Remember people with diabetes are more susceptible to *high cholesterol* in their blood and heart disease. Practice low fat cooking methods, using non-stick pans.
10. Use only lean cuts of animal proteins and practice correct portion sizes. Avoid using more than 3 whole eggs/week. Egg whites are okay.
11. *Pickles*, *chutneys* etc. are very high in sodium. *People with hypertension* must take note that table salt, baking powder, and baking soda are sources of sodium and therefore must be used carefully.
12. Desserts must be restricted to fresh fruits; artificially sweetened low fat desserts made from allowed foods may be used occasionally.
13. Drink plenty of water, at least 6 to 8 cups a day.

Some examples of heart-healthy and not so heart-healthy foods

Food Groups	Heart-healthy	Not so heart healthy/use less often
Starches	Plain rice, plain *roti*	Fried rice, fried potato
Meat and Meat Alternatives	*Dal*, skinless chicken	Fried *Dal*, chicken with skin
Dairy	Skim milk, low fat yogurt	Regular milk, yogurt with extra cream
Vegetables	All vegetables with no more than one teaspoon of oil per ½ cup cooked vegetable	Fried vegetables, creamed vegetables
Fat/oils	Margarine, canola oil	Butter, coconut oil

Weekend and Party Planning

Food plays a major role during the weekends and the social gatherings. Nepalese tend to live in an extended family environment. As a result, members of the family constantly get in and out of the house at different times. Thus, food is constantly being prepared to ensure that nobody remains hungry including the guests who come unannounced, which is a common event. Most Nepalese prefer to eat the home cooked meal.It is quite common for the family members and guests to consume high caloric foods. High caloric fried snacks and desserts are commonly offered to guests. Refer to the Summary section on how to eat healthy .

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ORIYA & BENGALI CUISINE

Indian food is typically associated with a lot of masala, spices and high calories. The dietary habits of people in the Eastern coastal states of Orissa and West Bengal include the consumption of a lot of fish. Cooked with very little or, at times without oil, these two eastern states offer a variety of low-calorie delicacies. There are many similarities yet vast differences in the Oriya and Bengali cuisine. Both regions have their distinctive food habits and cooking styles: Bhaja, Bhapa, Bhuna, Chachchari, Chhenchara, Dalma, Dalna, Dum, Ghanto, Jhol, pora, and tarakari. To the casual palate, the Eastern Indian food means rice and fish. Rice is the staple food. The other characteristic of coastal cuisines is the use of coconut in many recipes. Unlike other coastal kitchens, however, coconut oil is not used. The preferred cooking medium is mustard oil or refined vegetable oil (mostly groundnut). Traditionally food was cooked on cowpat (made of dried cowdung), wood or charcoal fires but recent years have seen an emergence of gas, electric, and microwave ovens.

In terms of day-to-day cooking, Eastern Indians don't use many spices. The main ingredients in most of their food is Paanch phhotan (in Oriya) or Phancch Phoran (in Bengali), which is a mixture of mustard seeds, coriander seeds, meethi seeds, black coriander seeds etc. This is used for seasoning. The other major ingredient is garlic and mustard seeds finely ground together, called as Besara in Oriya and Sorsho Bata in Bengali. Oriyas and Bengalis are rice eaters and along with rice, a typical Oriya or Bengali meal has to have a combination of a deep-fried vegetable; a mixed vegetable which is cooked with garlic and mustard paste and seasoned with paanch phootan; and of course, the ubiqitous Maccher Jhol (fish curry).

Oriya and Bengali cuisine recognizes and gives a place for the five basic tastes of astringent, bitter, sweet, sour and hot. While an Oriya meal does not have a specific course of serving the food items, an authentic Bengali meal does. It begins with bitters, either in the form of shukto (a kind of stew with vegetables, drumsticks or bitter gourd) and moves on in stages through the dhals with fries and fritters, a vegetable dish like a ghonto or chhokka, to the non-vegetarian items of fish or meat. Before ending on a sweet note, there is the occasional treat of an astringent or sweet chutney.

In general, Oriya and Bengali meals include one or more of the following.

- Rice, white and parboiled (most commonly used). Rice is the staple food in Orissa and Bengal and is incorporated in many ways. For example puffed rice is used frequently for breakfast and snacks.
- Rotis are consumed mostly at dinnertime or during breakfast.
- Dhals and legumes of various kinds. Most common dhals are toor, urad (especially to make cakes and snacks), gram and mung (most frequently used). Dhal is sometimes cooked with vegetables called “dalma.”
- Fish is an integral part of the diet. In fact it is considered auspicious, and no Oriya and Bengali function can do without fish. The fish curry is usually cooked with mustard and garlic paste. And there is a preference for Hilsa fish followed by Rohu and Katla (all three are fresh water fishes). The delicious Dahi Macch is prepared with fried fish dipped in gravy made out of curd.
- Mutton, chicken, and eggs, along with seafood are also used. The coastline offers an abundant variety of shrimps, lobsters, and crabs that are relished in a variety of cooking styles and often spiced up.
- Consumption of lamb and pork are not very common in Eastern India.
- Vegetables are consumed in different forms: stir-fried, sautéed, bhartha (pureed or minced vegetables), or curried with a paste of garlic, ginger, and onion. Fresh

vegetables are often seasoned with light spices (Paanch phhotan). Often vegetables are cooked with fish, mutton, and chicken, especially in the curry form.

- Fruits are consumed fresh, mostly as after dinner desserts. These include watermelon, mango, lichees, apples, oranges, guavas, papayas, and a variety of plantains, and bananas.
- Tea is the most popular drink and is usually served with milk and sugar. Use of coffee is rare in the average households. Other popular drinks are coconut milk (from the young coconut, mostly a popular street-side drink), Lassi, a delicious iced curd drink, and Nimbu paani (lemon squash).
- Ghee is served on top of rice to enhance flavor.
- Water is served with meals. Most people sit down on the floor on a mat during meals and eat with their fingers.
- Coconut – is abundantly available and mostly used in the cooking (curries, dalma, sweets, chutneys) etc.

Sweets

People of Orissa and West Bengal are sweet lovers, and have always been known for their particular weakness for sweets. It is rare to see meals completed without sweets. The choice of sweets for Oriya and Bengali meals are unlimited. From the ubiquitous mishti doi and rossogolla, to the more rare pithey and pulli, the choice is boundless. Certain sweets are made on special events. Use of *chhana* (reduced milk) for making sweets is honed to perfection. *Rasogolla* and innumerable varieties of *sandesh are available today. Besides these the* tradition of home made *pitha*, and sweets made of rice powder, sweet potato, *kheer*, coconut and gur is still common.

Meal Pattern for the Traditional Oriya/Bengali Client with Type 2 Diabetes

Time	Typical	Modified
Breakfast (7:30 AM)	1 cup tea with whole milk and sugar 1 cup chuda (puffed rice) upama	1 cup tea with skim milk (or 1% fat milk) and with no sugar (preferable). 2 slices of whole wheat roti/ bread toast. 2 table spoon of chutney 2 tsp margarine
Snack (10:30 AM)		1 fruit 3 graham crackers
Lunch (12:00 noon)	3 cups of rice 2 oz of meat or fish 1 cup of dhal 1 cup of stir-fried vegetables 2 table spoon of tomato/dhania chutney ghee, pickles	1 ½ cups of brown rice ½ cup of dhal 1 cup of vegetable curry 1 cup of stir-fried vegetables 2 oz of fish (low fat) or meat (white, lean) 1 cup low fat yogurt 2 table spoon of tomato or dhania chutney (fresh)
Afternoon tea and snacks (3:30 PM)	2 cups of Mudhi (puffed rice) and mixture (fried nuts and legumes)	½ cup dry cereal mix or 3 saltine-type crackers or 10 unsalted roasted peanuts ¾ oz salt-free pretzels 1 cup tea with low fat milk and no sugar.

Dinner (7:00 PM)	3 cups of rice 1 cup of dhal 3 oz of meat or fish 1 cup of stir-fried vegetables 1 cup of curry (mixed vegetable and chickpeas). pickles	1 cup brown rice 1 roti 1 cup stir-fried vegetables ½ cup mixed vegetables with chickpeas. 1 cup dhal or 3 oz of chicken or fish ½ cup salad
Snack (9:00 PM)		1 fresh fruit 1 cup of skim milk

Healthy Foods	**Not so heart-healthy (use less often)**
Starches	
Roti	Parata fried with oil
Plain brown/basmati rice	Pulao or fried rice w/ >1 tsp oil
Roasted mudhi or chuda (puffed rice)	Chuda upama with oil and vegetables
Meat or meat alternatives	
Dhal (mung, toor, or masoor	Dhal with lots of oil or ghee
Baked Fish or Chicken	Fried chicken or fish
Pan-fried fish w/masala	Fried fish in tomato gravy (cooked with oil and spices)
Vegetable dishes	
Stir-fried vegetables	Vegetable curry w/ lots of oil and spices
Dalma (mixed Vegetable w/ dal)	Dalma with coconut and ghee
Dairy	
Yogurt and buttermilk made w/ skim milk	Yogurt and buttermilk w/ whole or 2% milk
Raita made with low-fat milk	Raita with fried boondi
Rasgolla and other steamed desserts	Desserts made with whole milk and or fried
Fruit dishes	
Plain fresh fruit	Fruit salad with w/jaggery & nuts

Weekend and Party Planning

Food plays an important role in social gatherings of Oriyas and Bengalis. Festivals and weekends are the time when people indulge in rich and high calorie food, alcoholic beverages, and soft drinks. Plan ahead and adjust your food intake for the whole day to avoid a heavy overload of carbohydrates and fats and protein. Request your host or the Restaurant to prepare 1-2 special or modified dishes for you!

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SOUTH INDIAN CUISINE

South Indian cuisine refers to foods from 4 states, namely Tamil Nadu, Karnataka, Andhra Pradhesh and Kerala; also included is Pondichery, which is a union territory. Variations in food practices along with language, culture, heritage and customs are very apparent among the 4 states. There are innumerable specialty foods based on region. However, one may be able to find some common features.

In general, South Indian meals include one or more of the following in different forms:

- Rice, white or parboiled. Since rice is the staple food of South India it is incorporated in various ways.
- Dhals or legumes of various kinds. Most common dhals are toor, urad , gram and mung. The 2 staples, namely rice and different dhals are used in a variety of ways-pounded, ground, fermented, boiled, sautéed and so on. e.g. Idli, Dosa etc.
- Most commonly used animal protein foods are fish, chicken, lamb,mutton and eggs for non-vegetarians
- Vegetables are generally stir-fried or roasted to crispness (curry or porial) or served wet including dhals and coconut (koottu)
- Fruits are usually consumed fresh or as juices
- Desserts largely made from reduced milk (payasam or kheer), jaggery or brown sugar based cooked rice and lentils (sweet pongal, appam,adirasam, jilebi), and other sweetmeats, using clarified butter, nuts and spices like cardamom.
- "milky" coffee or tea
- ghee or clarified butter is served with rice and flavor enhancer. Sesame, peanut and vegetable oils are used in cooking
- salt served separately on the plate for optional use
- water served with meals
- the most commonly used spices are coriander, asafoetida, cumin seeds, fenugreek, ginger, pepper (red, green, and black), turmeric, saffron and other various combinations of these used as curry powders

Shredded coconut, coconut oil, fried plantain chips and fish are more common in Kerala, whereas spicier foods are popular in Andhra, including pickles and chutneys. Cereal-lentil preparations using oil or clarified butter are more common in Karnataka and Tamil Nadu.

Acculturation of Indians in America includes the selection of American or other ethnic foods for main meals or snacks especially by younger generation. Additionally foods from other regions are more commonly used by South Indians, for e.g. puris, samosas, chapathis etc.

Meal Pattern For The Traditional South Indian Client With Diabetes Type 2

Breakfast	Typical	Modified
7.30 A.M.	1cup coffee with whole milk 3 idlis or 1plate upuma coconut chutney	1cup coffee with 1% fat milk 2 slices of whole wheat toast with 2 tsp. Margarine or 2 small idlis or 1Cup Uppuma 2 table spoon of chutney (tomato or dhal chutney preferable to coconut)
Snack 10:30 A.M.		1 fresh fruit 8 oz. Diluted buttermilk
Lunch 12:30 P.M	3 cups of white rice 1 cup Sambhar 1 cup Rasam 1 cup green plantain curry 1 cup mixed veg.koottu 1 cup curds 1 or 2 fried papadums or potato chips ghee,pickles	1½ cups of brown rice ½ cup Sambhar 1 cup rasam 1 cup string beans curry shredded carrot salad w/lemon ½ cup non-fat yogurt 1 roasted small papadum 2 tsp oil in cooking water to drink
Afternoon coffee 3:30 P.M.	2 murukkus (pretzel like fried) cup coffee	½ cup dry real mix 1 cup coffee w/low fat milk
Dinner 8 P.M	3 cups of cooked rice 1 serving of fish, chicken (for non-vegetarains) 1 cup of sambhar 1 cup fried vegetables 1 cup whole milk curds pickles, papadum etc	1½ cup of cooked rice (brown) or 3 small rotis 3 oz of chicken or fish cury or 1 cup sambhar or whole gram sundal 1 cup stir- fried vegetables with 2 oz. tofu ½ cup low fat yogurt (High in salt) use occasionally 2 tsp oil in cooking
Snack 9:00 P.M.	1 fresh fruit 1 cup ice cream	1 kiwi or a small orange 10 peanuts roasted

Healthy Foods

Starches:

Idli: Steamed, low in fat
Dosas: cooked with minimal oil
Uppuma made from cracked wheat

Meat or meat alternatives

Dhal or sprouted mung dhal
Dhal adais with controlled oil
Chicke tikka
Pan-fried fish with masala

Not so heart-healthy (use less often)

Idlis topped with a lot of oil
Dosas using extra oil or butter
Uppuma made with liberal amount of oil or ghee

Dhal made with cream or excess ghee
dhal adais made with excess oil
Fried chicken
Fried fish in coconut sauce

Vegetable dishes

Stir-fried green veg, such as cabbage curry/palya	Potato roasted curry with a Lot of oil
Mixed veg. Koottu with minimal coconut	Aviyal with a lot of coconut

Dairy

Buttermilk made from skim or low fat milk	Buttermilk made from whole or 2 % milk
Pal koottu or majjige pulusu with low fat curds	Pachadi(raita) with sour cream And fried bundhi

Fruit dishes

Plain fresh fruits	Bananapachadi with jaggery & Nuts
Plain jack fruit or mango	Chakkapradaman w/nuts

Tips for changes:

1. *Encourage* use of brown rice instead of white rice. The increase in fiber content will improve glycemic control. There is a general misconception that diabetes must avoid all rice, which is not necessary.
2. Instead of using only rice, select from a variety of grains, such as cracked wheat, oats, and barley.
3. Avoid washing rice several times before cooking or cooking in excess water and draining.
4. Keep in mind that the recommended portions are for the cooked product where applicable.

   For e.g. 1 serving of dhal = 2 Tbsp. of uncooked dhal
   1 serving of rice = 3 Tbsp. of uncooked rice

   This is important because the finished product may vary greatly in consistency.
5. Try to cook with minimum amount of oil. Preferred oils are olive, or canola, as they are high in monounsaturated fats.
6. While using potato, green plantain or other starchy vegetables, remember to cut down on the amount of rice eaten. Smarter thing to do is selecting a green vegetable more often than starchy ones.
7. Use green vegetables more freely and learn to cook them in a small amount of oil. Salads are good with any meal. Simple lemon or vinegar dressings may be freely used.
8. Switch over to skim or 1% low fat milk instead of whole milk. This will reduce the saturated fat content in the diet.
9. Avoid frying of snack foods; learn to look for recipes, requiring dry roasting, baking etc. Remember people with diabetes are more susceptible to high cholesterol in their blood and heart disease. Practice low fat cooking methods, using non-stick pans.
10. Use only lean cuts of animal proteins and practice correct portion sizes. Avoid using more than 3 whole eggs/week. Egg whites are okay. For the Vegetarians, try to incorporate tofu or soy bean curd in various recipes to improve the protein quantity of the meal.
11. Pickles, chutneys, papadums etc are very high in sodium. People with hypertension must take note that table salt, baking powder, and baking soda are sources of sodium and therefore must be used carefully.
12. Desserts must be restricted to fresh fruits; artificially sweetened low fat desserts made from allowed foods may be used occasionally.
13. Drink plenty of water, at least 6 to 8 cups a day.

Weekend and Party Planning

South Indians are very similar to other immigrants in trying to entertain and relax on the weekends. Food becomes an important part of the social gatherings. Quite often, festivals and holidays are celebrated on the weekends with friends. Pot-luck dinners are very popular. Men may indulge in alcoholic beverages while women generally limit themselves to sodas and juices. For the person with Diabetes, it is important to plan ahead mentally about the right choices and portion sizes. Bringing in adish that will be right for you is a good idea.

Party meals consist of several varieties of rice, vadas, bondas, vegetables prepared with liberal quantities of coconut, oil, nuts and legumes. Fried snacks, roasted nuts, potato chips, papadums and chutneys make the feasts mouth watering and of course calorie-laden! Desserts of various kinds appropriate to the celebration are also brought in, in addition to cakes and doughnuts to satisfy the palate of the younger generation.

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MAHARASHTRIAN CUISINE

Maharashtrian cuisine encompasses a variety of food preparations, from the coconut based coastal cuisine to an interior distinctive cuisine known as the *Varadi* cuisine. All of them share a lot of commonalities:

Grain Group

Examples of one serving size would be: 1 chapati, ½ cup of cooked rice, ½ cup of *pohe.* Rice and wheat are the main staple food grains in Maharashtra..A Maharashtrian meal cannot be complete without chapati or *bhakri* (jawar or bajra roti) with *toop* (clarified butter-ghee). Breakfast comprises of preparation like *pohe* (seasoned beaten rice).

Desserts or sweets like *sheera (*sweet semolina), *kheer, shankarpaali* (made out of refined flour and sugar) are common. And special occasions call for *puris* (deep fried) or one of the most liked Maharashtrian dish called *puranpoli* (chapati with a lentil and jaggery filling).

Vegetable Group

Example of a serving size would be ½ cup of cooked vegetables and 1 cup of raw vegetables, like spinach. There is an enormous variety of vegetables in the regular diet made in both the semi-solid with gravy style and the dry style. Curries like *bharlivangi, bharlibhendi* are made on special occasions. The vegetables are more or less steamed and lightly seasoned so as to retain their nutritional value. Deep frying and roasting is not a common practice. And few of the common dishes are *bharit* (lightly cooked or raw vegetables in yogurt), *paale bhaji* (leafy vegetables), *paatal bhaji* (spinach or fenugreek with lentil and peanuts), *zunka* (made with gram flour and vegetable).

Salad or *koshimbir* is a very important part of every meal. It is made out of a variety of raw vegetables like cucumber, tomatoes, onions, spinach. And this is garnished with coriander and peanut powder, and is lightly seasoned with *phodni* (hot oil with spices).

Fruits Group

Example of a serving size would be a tennis ball size of apple, a medium banana, ½ cup of *aam ras.* Fruits are consumed both whole and pureed. *Aam ras* (mango puree) and *shikran* (banana in milk) are commonly consumed. And in summer *pana* (raw mango juice) is relished.

(Pureed, sweetened fruits carry concentrated calories and adjustments have to be made accordingly to avoid a high sugar load at any one meal).

Milk/Yogurt Group

Example of a serving size would be 1 cup of milk, ½ cup of yogurt, 1 cup of butter milk. Milk is used in the preparation of tea and many of the sweet preparations like *kheer.*

Yogurt is a very vital ingredient in preparing *koshimbir, bhajis* (vegetables), *chutney* (spicy accompaniment made out of a variety of foods) and it is also used to make a famous Maharashtrian dessert, *shrikhand* (Curd whey with sugar). *Taak* (buttermilk) and yogurt is also eaten with rice. Buttermilk is also used to make *taaka chi kadi* (buttermilk with gram flour).

Meat, Poultry, Fish, Dry beans/Lentils, Eggs and Nuts Group

An example would be ½ a cup of *dal,* ½ cup of chicken or mutton curry. *Dal* (Toor dal) or *umpti*

(sweet and sour toor dal) are a must with rice for a Maharashtrian. A variety of lentils like masoor, chana, toor, mung are used in the preparation of *varan* (dal) .*Mooga chi dal* (mung dal), *mooga chi usal , vatana chi usal* (dried peas) are also the delicacies. Sprouted mung dal is used widely and is prepared in many different ways.Peanuts are used in a lot of preparations like *chutney, chikki* (peanut and jaggery), and it is used as garnish for the *koshimbiri* and *bhaji.*The people in the coastal parts of maharashtra enjoy a variety of fish like *bombil* (bombay duck), which is batter fried, *bangda* (mackerel) is curried with red chilles, ginger and *tirphal* (a spice). *Paaplet* (pomphret) is usually barbecued or shallow fried.

Lamb and chicken is mainly consumed in the interior part of Maharashtra.

Foods in this group are excellent sources of proteins, B vitamins, iron and zinc. Lentils/*dals* are also a good source of fiber.

Food preparations during *upaas* (fast)

Fasting time actually turns out like a feast, as Maharashtrians prepare numerous dishes garnished with peanuts. *Sabudana chi khichadi, sabudana wada* (a deep fried snack) *bagaar* (a type of rice), *batata cha khees* (grated potato-seasoned) are the hot favorites during fasting.

Jaggery, tamarind and *kala masala* (is a special blend of spices) is added in most of the vegetables and lentils which makes the foods piquant .

Although Maharashtrians usually tend to stick to the traditional cooking style, Maharashtrians in America have incorporated a tad of western cooking, making it a nice blend of both.

One Day Menu Plan for A Traditional Maharashtrian Client with Type II Diabetes

Meal	Typical	Modified
Breakfast 8.30 AM	1 cup *chaha* (tea) with whole milk and sugar. 1 bowl *pohe.* 1 banana	1 cup *chaha* made out of skimmed milk and non-caloric sweetener. 1 cup of *pohe.* 1 apple or ½ banana
Lunch: 12.30 PM	2 cups white rice 2 chapatis with oil or ghee 1 cup *umpti* (toor dal with jaggery and tamarind) ½ cup *batata chi bhaji* (Potato curry). ¼ cup cucumber *koshimbir* (salad) with peanut powder and *phodni.* 1 cup yogurt or buttermilk.	½ cup brown rice 2 phulkas without oil or ghee 1 cup *varan* (toor dal without jaggery). ½ cup string beans *bhaji* or 1 cup *methi chi bhaji* (fenugreek curry). ¼ cup cucumber *koshimbir* peanut powder or *phodni.* ½ cup non-fat yogurt or buttermilk.
Snack: 4.00 PM	1 cup *chaha* (tea) with whole milk and sugar.	1 cup *chaha* made out of skimmed milk and sweetener. 2 whole wheat crackers. ½ cup watermelon.

Meal	Typical	Modified
Dinner: **8.00 PM**	1 cup white rice. 2 chapatis with oil or ghee. 1 cup *mooga chi usal* (mung dal) with fresh grated cocunut. 1 serving of fried fish. 1 cup *kokum kadi* (kokum fruit in coconut milk)	½ cup brown rice. 2 phulkas without oil or ghee. 1 cup *mooga chi usal* (mung dal) without coconut. 3ozs barbecued fish (with very little oil). 1 cup kokum juice without coconut milk or ¼ cup *kokum kadi* with coconut milk.

Weekend and Party Planning

Weekends are usually spent with friends and relatives and food becomes a major part of the good times. Presentation of food has a lot of importance for Maharashtrians. Party favorites include a different type of rice preparation like *vaangi bhaat* (brinjal rice), *tondli bhaat* (tindora rice). Fried snacks like *chewda* (made out of beaten rice), *chakli* (deep fried, made out of gram flour) are often served. *Shrikhand* (curd whey and sugar), *aamrakhand,* or *kheer* are served as desserts.

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GUJARATI CUISINE

Gujarati Cuisine is primarily vegetarian with Jain and Buddhist influences. Gujarat can be divided into 4 regions and due to different climate, there are slight variations in eating habits and preparation of food. The four regions are South and North Gujarat, Kathiavad and Kutch. Gujaratis have a sweet tooth and every dish from vegetables, dal, pickles to chutneys they add gud (Jaggery) and sugar. Jains do not eat onion and garlic. Rotli is prepared like petal soft Phulkas to crunchy, bone dry Khakhras. Khakhras are used for breakfast, or as a snack or while travelling.

South Gujarat

In **Surat**, vegetable dishes like Undhiyu and Paunkh are very popular. Suratis add green chilies to add life to the food. They love sweets like Nankhatais and Gharis which they buy from local bakeries and shops. No expensive ingredients are used or elaborate preparations are made yet food in its simplicity tastes exotically different.

North Gujarat

It is lower in spices and oil is used sparingly. It is popular for its traditional Gujarati Thali which consists of Farsan (appetizer) like Khaman Dhokla and Khandvi (chickpea flour), one variety of Dal or Kadhi (prepared from yogurt), hot fluffy Puri or Rotli, couple of vegetables, sprouted beans, Raita (yogurt), Doodhpak (sweetned milk with saffron and nuts), Papad, chutney and pickle.

Kathiawad

Kathiawadi's love Dhebras (made from wheat flour, yogurt, spinach, green chilies, sugar and salt) and they eat with Chhunda (sweet, sour and hot mango pickle). They also use Methia Masala (dry powder made from fenugreek seeds, chili powder and salt) to sprinkle on vegetables. They also use red chili powder to make spicy cuisine. Also eat lot of peanuts and til (sesame seeds) – Peanut Chiki (made with gud) tastes delicious.

Kutch

Kutchi cuisine is very simple. They mainly use rice and pulses. Main dish is Khichdi (mixture of rice and mung dal) and Kadhi (curry made of yogurt) or Bajra no rotlo (made from Millet) with home made pure ghee (butter) and gud (jaggery), guvarnu shak (vegetable) and chhash (buttermilk). Kutchhis also eat Dudhi Muthia (made from Snake Squash and flour) and some common dishes like Dhokla (a salty steamed cake), Doodhpak or Shrikhand (sweet made of yogurt, Cardamom, Almonds and Saffron) with hot fluffy puris.

In short, in Gujarati cuisine concentration is on fried snacks and use of lot of ghee, oil, sugar and jaggery. Many Gujaratis do not eat green vegetables frequently and hardly eat fruits.

Meal	Typical	Modified
Breakfast 7:30 am	1 cup Chai (Tea) with whole milk 4 tsp regular sugar 2 –3 Theplas	1 cup Chai with 1% milk 1 package – no calorie sweetner 1 Thepla or 2 plain Khakhras ¾ cup 1% Milk 1 cup Water
Snack 10:30 am	30 Salted Peanuts	10 unsalted roasted peanuts 1 cup Water

Lunch 12:30 pm	4 Rotlis with 4 teaspoons ghee ½ cup Toor Dal with sugar 1 cup Black eye peas with sugar 1 cup Bhat (rice) ¼ cup Yam ¼ cup Dahi (yogurt) 1 cup regular soda 1 tsp vegetable oil in cooking	½ cup Salad with lemon and vinegar 1 Sooki Rotli – no ghee ½ cup Toor Dal no sugar ¼ cup Black eye peas no sugar ¼ cup Bhinda nu Shak (Okra veg) ¼ cup Bhat (rice) ½ cup Dahi (1% milk) 1 small apple 1 cup Water ½ tsp olive oil in cooking
Tea Time 3:30 pm	1-2 cup Chai with 1 oz whole milk 4 tsp regular sugar 1 cup Fried Chevda 1 ½" x 1 ½" Mohanthal (sweet)	1 cup Chai with 1oz 1% milk 1 pkg – no calorie sweetner ¾ cup homemade high fiber high protein or high fiber cereal Chevda 1 cup Water
Dinner 8 pm	1 Fried Papad 3 Parathas with 6 tsp oil 1 cup Batata nu shak (Potato veg.) 1 cup Chhash (Buttermilk) 2 1" Mug-ni dal ni Kachori with Amali-ni chutney 2 Tbsp Chhunda (mango pickle)	½ cup Salad with Lemon & vinegar 1 Paratha with ½ tsp oil – use non stick pan ½ cup palak with 1% lowfat Paneer or Extra firm silken Tofu ½ cup 1% Dahi (yogurt 1 medium orange 1 cup Water
Snack 9 pm	6 Dried Dates 1 oz bag Potato chips 1 cup water	3 Dried Dates 6 Almonds 1 cup water

Weekend and Party Planning

Gujaratis love weekend gatherings and partying, and it starts from Friday evening often goes on till Sunday evening. Mostly men drink few pegs of scotch with snacks such as kachoris, samosas, vegetable cutlets, cashew rolls and varieties of Bhajias. Problems in this area that call for your attention before you go to that party or the restaurant: Remember PORTION CONTROL ; plan your day's meal ahead of time so that importance is given to healthy preparations, the kind and amount of fat used and the importance of avoiding carbohydrate or fat loading

Party meal consists of

Fried Papad, Puries, Shrikhand (rich sweet made from whole milk and sugar), Valor nu shak (pulses or legumes), Undhiyu (mixed vegetables, potato, flour ball – muthias swimming in oil), Vegetable Pulao, Kadhi (made with buttermilk), Raita, Kataki (cubed mango pickle).

It is recommended that to go easy on appetizers, offer variety of sliced vegetables with Humus (Mediterranean dish) as an example. Humus is made from ground chick peas, sesame paste(Til- high in calcium), green chillies, ginger and lemon (easy recipe – can keep in the refrigerator).

Consider serving Handva, Dhokla and Idly instead of fried items. Eg. 1" square Dhokla = 1 Rotli, ½ cup Pauva = 1 Rotli, got the idea! That is called carbohydrate counting. Dairy,

vegetables, fruit and food from the grains group all contain carbohydrate. Consumers with Diabetes need to learn serving sizes.

Modified Party Meal

½ cup lettuce and tomato salad
1 teaspoon fat free salad dressing (Walden farm brand tastes good)
1 3" Puri
⅓ cup Undhiyu
¼ cup Kadhi
¼ cup Vegetable Pulao
1 small oven baked Samosa
1 oz. Shrikhand
¼ cup fresh fruit salad

Healthy Foods	Not so heart healthy (use less often)
DAIRY:	
1% or 2% Milk	Regular Milk
Dahi made from 1% or 2% Milk	Dahi made from regular Milk
MEAT OR MEAT ALTERNATIVES	
Black eye peas with np calorie sweetner Roasted Papad	Black eye peas with sugar Fried Papad
VEGETABLE	
Palak vegetable with 1% low fat paneer or Extra firm Silken tofu	Batata Nu Shak
Bhinda (Okra) Nu Shak	Mashed Yam
FRUIT	
Grapes	Mohanthal
Fruit Shrikhand made with 1% Dahi	Shrikhand made with Dahi
GRAIN	
Home made high fiber cereal (Chevda)	Fried Chevda
Paratha with 1 tsp olive oil – use non stick pan	Paratha with 1 tablespoon cotton seed oil

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CHOOSING HEALTHY SNACKS

One of the life-style changes made by Asian Indian immigrants in the US relates to food intake and this has many health implications. Savory and sweet snack foods have always been an indispensable part of the Indian cuisine. There always was chevda, sev and various saltines (namkins) whipped out of the pantry in a quick minute to be served and shared with a cup of tea or coffee even for the unexpected guest.

Snacking however has assumed an even more important role in the Indian immigrant household due to lifestyle constraints like the working homemaker, lack of time for food preparation, (secondary to long commutes to work, multiple tasks, and responsibilities) the absence of social support systems for child care and the ready availability of ready to eat snack foods that may not necessarily be healthy.

Most vegetarian snack items are either made with cereals like rice, rice flour, semolina (sooji), refined wheat flour (maida) or whole wheat flour (atta) and legume flours like chick pea flour (besan), moong flour either in combination or alone. Some snack items may contain nuts, vegetables, spices, salt, oil, ghee and or sugar.

Based on the method of preparation snacks may be:

- Savory and salted snacks that are not deep-fried, for example: Uppuma, Pav Bhaji
- Savory and salted items that are deep fat fried, for example: Samosa, Pakoras, Bhujias, and Murruku (deep-fried, crunchy spirals).
- Savory and salted items that contain a combination of deep-fried and raw ingredients, for example: Bhel puri, Dahi wada, Pani puri and Chaats.
- Sweet snacks prepared and preserved in a sugar medium, for example: Rasagolla, Pumpkin petha.
- Sweet snacks deep fat fried and preserved in sugar syrup, for example: Jilebi, Gulab Jamun.
- Non-vegetarian snacks baked, fried or grilled, for example: Chicken or mutton tikka, Egg pakoras, Fish fry, Shish kababs.

Nutritional Values

Vegetarian snack foods that are based on cereals or legumes are high in carbohydrates. The fat and calorie content is high as well, due to many of the items being either fried or containing oils, ghee or butter. While the salt content of the savory snacks may be high the sweet snacks tend to have even higher amounts of carbohydrate due to the sugar content. When served in combination a savory item with a sweet snack, - the mini meal may have the calories, fats and carbohydrates to be safely considered a meal replacement.

Non vegetarian snack items though considerably lower in carbohydrates and higher in protein are nevertheless calorie rich due to the fats they may contain (often saturated).

Snack Patterns

Traditionally savory snacks are consumed between meals while sweet snacks may be consumed after dinner. A social visit by friends or family prompts the inclusion of snacks with a cup of coffee or tea and may be sweet, savory or both, for not only the guests but the hosts as well. Snacks feature prominently in holiday and special occasion menus.

A predominant number of Indians men and women are in the workforce, hence on weekdays the work force environment may permit the inclusion of a pre-lunch snack at work and a pre-

dinner snack either before leaving the workplace or upon arrival at home. Lack of time for food and snack preparation may influence the inclusion of ready to eat snacks in the diets of this population. Store-made, ready-to-eat snacks while being available on time to appease hunger may offer very little room for manipulation of the actual nutrients and calories ingested. Weekend snacking provides an opportunity to consume more traditional Indian snack items both at home and /or social gatherings. It is customary to serve snacks as appetizers in restaurants and homes.

The challenge of selecting and consuming healthy snacks though daunting is achievable even for the diabetes seeking glycemic control and weight management.

Tips for choosing healthful snacks:

Daily living:

- Plan your snack menu ahead.
- Take snacks along with you to work.
- Add zing to bland items with free foods.
- Select whole grains when feasible.
- Select baked or steamed snacks rather than fried snacks.
- Include fresh fruit rather than fruit juice for increased fiber.

Dining Out:

- Eat a healthy snack at home before you go out (a slice of low calorie whole wheat toast with coriander chutney*)
- Pick appetizers that are not fried – pick a light soup or fresh lemonade or tomato juice.
- Eat slowly relishing every bite.
- In social situations learn to say – no thanks to second servings.
- If eating in a restaurant – divide your entrée into 2 parts consume one part and take the other home for the next meal.

* Available at most Indian grocers.

Some Healthful Snack Ideas

1. Make your own chevda mix by mixing together 1cup whole wheat Chex, 1cup Puffed rice, 1 cup baked vegetable chips and 1/2cup of dry roasted unsalted peanuts – add your favorite spice powder - shake in a bag and divide into 1/3 cup portions and take it along for a snack at work.
2. Don't like those dry crackers – don't ever want to eat that Melba toast again? Try putting low calorie toppings like a teaspoon of tomato salsa, coriander or mint chutney for a tasty healthy snack. You could even make your own version of chutney/salsa sandwiches with lettuce /tomato and cucumber on whole wheat or multigrain bread for an office snack. If you are being treated for high blood pressure use toppings like salsa, coriander chutney pickles sparingly.
3. Before you stock your pantry with snacks – plan on items you will buy – choose:

   Whole grain cereals, crackers and breads. Mint and coriander chutneys along with tomato salsa may be store bought. Include fresh carrots, cucumbers tomatoes and your favorite vegetables to be eaten raw in your snack list. Do not shop on an empty stomach.
4. If you plan on making snacks avoid deep fat frying or adding excessive amounts of oil, butter or ghee. Use low fat replacements when feasible.

5. When making sweet snack consider replacing part of the sugar with sugar substitutes like Equal or Splenda.
6. Use salt and baking soda with caution in all your cookery.
7. Read all product labels to learn what ingredients they contain.
8. For a personalized snack/ food plan contact a Registered Dietitian RD.
9. A snack is not a meal! – keep snack portions small.

How Nutritious is your Favorite Snack?

The table below will help you think about possible healthy snack items in different food groups. Remember portions will still have to be controlled and so should the use of oils, fats, sugar and salt.

Healthy Snack	Not so heart healthy (use less often)
Plain Puffed rice mamra, mudi, Pori. Whole wheat phulka or chappati	Bhel puri Fried maida or wholewheat puri
Roasted corn on the cob Boiled potato chaat or tikkia Baked vegetable chips	Corn pakora Potato vada or fritters,samosa Potato chips
Green gram or chickpea sundal or ghugni or channa masala. Fresh sprouted moong beans. Dhokla	Gram flour batter fried bajjia, vegetable fritters. Dal vada,
Fruit Chaat Fresh fruit	Sweet fruit preserves chutneys. Fruit pies and cake. Chocolate covered fruit.
Grilled tandoori fish, chicken or lamb, kababs or tikka	Fish fry, Chicken nuggets, Meat balls, cutlets and meat croquettes.
Plain lassi	Sweet lassi or mango lassi
Roasted unsalted peanuts	Salted peanuts mixed with fried chevda.

Practical Snack Modifications

Snacks	Modification	Comments
Sev/ mixed chevda bhel and nut mixes	Mix 1 part chevda mix with 3 parts puffed rice or puffed wheat. Add chopped up tomatoes, onion, coriander leaves, cucumber and a dash of lemon juice to puffed wheat /rice instead of chevda or fried mixes.	Reduce fats, carbohydrates and calories Adding vegetables adds fiber and taste.

Samosa/ Kachori/eggrolls	Prepare filling and use as stuffing in whole-wheat chappati, roll serve cut as cocktail wraps. Cherry tomatoes. Steamed cabbage leaves. Bell pepper halves Alternately form the filling into small patties lightly flour and roast on griddle	By not using the pastry shell and not frying you will cut on the calories and fat.
Sooji Uppuma	Prepare uppuma with cracked whole wheat	Adds fiber.
Fish fry and meat patties	Grill / bake or broil. Do not bread or batter	By not frying, the fat and calories are lower. By not breading or batter dipping you reduce the starch and calories.
Pappad	Roast in microwave or grill over open flame. Do not fry. Select less often if on a low salt diet.	By not frying you cut calories.
Sweet desserts Fruit juice/drinks, dried fruits, chocolate coated raisins or strawberries.	Replace with fresh fruit.	Cuts carbohydrates and calories. Adds fiber.
Portion sizes	Small and petite	Reduce calories, fats/ carbohydrates.
Chips / Dips	Replace with fresh vegetables like cucumber, bell peppers, carrots, tomatoes, and broccoli. Alternately use baked vegetable chips. Serve with coriander chutney, mint chutney or tomato salsa	Reduce calories, fats and carbohydrates. By including vegetables you reduce calorie intake and increase fiber.

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DESSERTS OF INDIA

Desserts are often used to convey gratitude, affection, respect, joy and reward. India with its rich heritage and diversified culture also varies a great deal in sweet preparations. Sweets are either prepared at home or eaten out (not limited to any one occasion). Most common are parties, lunch/dinner invitations, birthdays, festivals, anniversaries and, in general, eating out. There are numerous homemade and traditional sweets or desserts prepared which vary from region to region and place to place. They are usually passed on from generation to generation. The most common preparations that are region-specific but not limited to, are as follows:

- **North India/Nepal**: Kheer, Gulaab Jammun, Kulfi, Halwa (Suji or Gaajar or dhudhi), Mahi

  South India: Payasam, Sweet Pongal, Laddu

  East India: Rosogolla, Misti doi, Pithe, Sandesh, Rasmalai

  West India: Besan Laddoos, Shrikhand

Irrespective of the region one belongs to, the main ingredients that are used in these preparations are sugar and milk and fats or oils. These ingredients are a source of carbohydrate and calories and must be eaten cautiously.

The first ingredient is usually sugar, a simple carbohydrate that is absorbed in the blood stream very quickly and raises blood sugar. It is a concentrated source of calories (1 tsp or 5 gms = 20 calories) and therefore is referred to as a Calorie Sweetener as compared to a non-caloric sweetener such as 'Sweet and Low' or 'Equal'. Portion control is one big key to successfully manage diabetes.

The second ingredient most commonly used in the preparation of sweets and desserts is milk. The many homemade products that use milk are plain and sweetened yogurt, condensed milk fudge (khoa), fresh chenna and paneer cheeses, ghee and clotted cream. However most of these productswhen prepared from whole or even low-fat milk can raise blood cholesterol or contribute to heart disease. Most of the desserts or sweets are prepared by either whole milk or half-and-half for rich and creamy taste.

Modifications/Tips

1. Use Non-Calorie Sweetener in the preparation of sweets and desserts. Reduce the portion sizes. Use 1/4 the amount of sugar suggested in the recipe and add the rest with non-calorie sweetener if you cannot make the entire dish with non-calorie sweetener.
2. Try using canola or olive oil for frying (less saturated fats). Shallow frying is better than deep frying and using a non-stick pan usually consumes less oil. Cooking spray equally does well and is recommended for shallow frying.
3. Use 1% milk to make Mahi, Kheer, Payasaam, Halwa, yogurt for Shrikhand and Mistidoi, chenna for Rosogolla and Sandesh, paneer cheeses, custard and pudding.
4. Squeeze the syrup out from Rosogolla, Gulab Jamun and other sweets that are immersed in sugar syrup.
5. Try to eat only half or one piece depending on the size if the recipe is not modified. Often sweets are served as a form of prasad or prasadam in places of worship. Learning to eat smaller portions is always helpful.
6. Use lowfat or fat-free evaporated milk and unsweetened condensed milk if a recipe calls for regular condensed milk.

7. Monitor total Carbohydrate content
8. It is also a good practice to read labels and to look for total fat, sodium, and cholesterol content when buying a product if the nutrition information is available.
9. Remember to count dessert as a carbohydrate source and make appropriate adjustments in the diet and insulin intake where applicable.
10. Self monitoring of blood glucose (SMBG) is recommended to keep a track of your blood sugars. If it is high before a meal, passing the desserts may be a good idea. Generally, "Blood Sugar" and "Blood Glucose" refer to the same measure. Blood glucose is the value that indicates glucose content in the blood when tested. Fasting blood glucose levels refer to the blood test that is done in the morning before any food is eaten while Post –Prandial or Post meal is done 1½ to 2 hrs after eating a meal.

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LOW FAT COOKING AND HOW TO MODIFY A RECIPE

Diet related diseases like heart disease, obesity, cancer and diabetes greatly affect the quality of life. The need to manage these diseases with proper diet and a growing health-consciousness has brought awareness in people to explore new ways of cooking and eating. There are many sources to draw from including low-fat cookbooks and the latest sources are the numerous web sites that offer low-fat recipes.

It is important to remember that while fats, 'ghee' or oils bring richness and taste to the food, they also contain twice the amount of calories from carbohydrate or protein. Besides being a concentrated source of calories they are readily converted and stored as body fat. The kind and amounts of fats and oils used will determine if a recipe is heart-healthy or not. This section of the book will give you tips on making your favorite recipes healthier.

Making your favorite recipes healthier

With a little practice, you can turn any favorite recipe into a healthy dish.

- Change the cooking recipe: Instead of frying, bake, boil, broil or steam the food item. This will significantly reduce the amount of fat you consume.
- Using nonstick pans: Coating baking pans with vegetable cooking spray rather than using ghee or oil.
- Sauteeing: Sauteeing foods in water, wine, or fruit juice rather than oil or ghee.
- Removing or cutting down oils from curry, dal, sambar or rasam: Cool the curry after cooking, with a tea spoon remove the oil from the surface.

  Use a plastic degreaser constructed like a pitcher with a spout that allows the liquid to be poured from the bottom instead of the top.
- Trimming fat from poultry, beef or pork: Remove the skin of the chicken or turkey. Trim visible fat from beef or pork before cooking.

The following table shows how you can substitute ingredients to make your recipe healthier;

Food Item	Substitute with:
Cream	Evaporated Skim Milk
Whole Milk	Skim Milk or 1% Milk
1 cup ghee	¾ cup vegetable oil
½ cup ghee	⅓ cup vegetable oil
Regular cheese	low fat cheese or skim milk cheese
Cream cheese	light cream cheese
Butter	Margarine
Mayonnaise	Light mayonnaise or reduce calorie mayonnaise
Salad dressing	Reduced calorie, light or fat free salad dressing
Regular gelatin	Sugar-free gelatin mix or fruit juice mixed with unflavored gelatin
1 Whole egg	¼ cup egg substitute 2 egg whites or 1 egg white and 1 teaspoon vegetable oil
1 Ounce baking chocolate	3 tablespoons cocoa powder and 1 tablespoon vegetable oil

1 Can condensed cream soup	Homemade white sauce (1 cup skim milk + 2tablespoons flour + 2 tablespooons margarine)
Cream of celery soup	1 cup of white sauce + ¼ cup chopped celery
Cream of mushroom soup	1 cup white sauce + 1 cup chopped mushroom
Cream of chicken soup	1 ½ cups white sauce + 1 chicken bouillon cube
Fat in baked recipes	use no more than 1-2 tablespoons oil per cup of flour: increase liquid slightly to add extra moistness
Syrup packed canned fruit	Juice-packed canned fruit
2 Tablespoons flour (as thickener)	1 table spoon cornstarch or arrowroot
Sugar in baked recipes	Reduce amount by ½ the original amount: use no more that ½ cup added sweetener (sugar, honey, molasses, etc) per cup of flour. Add vanilla extract, cinnamon, and nutmeg to increase sweetness.
Baking powder	Low-sodium baking powder
Salt in recipes	Reduce amount or eliminate; use spices and herbs
Garlic, onion and celery salt	Use garlic, onion and celery powder
Fried items	Bake if possible or brush items lightly with olive or canola oil and bake

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MANAGING YOUR MENU IN AN INDIAN RESTAURANT

Lets start with appetizers

A healthy appetizer in Indian cuisine is rare, most are deep fried, for example: samosas, pakoras, puris. Papad can be either fried or baked, so of course the baked version is the preferred healthy piece. Recommendations are to share the appetizer or take a half of two different types.

Soups

Typical Indian soups are a lentil variety or a mulligatawny type soup. Both of these type of soups are healthy and low in fat and calories and high in carbohydrates. Creamy soups with coconut, which is a saturated fat should be avoided.

Breads

There are healthy options and of course the not so healthy ones, papads if they are baked area great choice, the fried ones are the ones to avoid. Chapatis and nans are fine as long as they are not swimming with ghee or oil.Puris and parathas are also laden with fat and not a great choice.

Entrees

To keep total fat, saturated fat and calories on the low end, try and select fish, chicken, or shrimp. Tandoori and tikka are healthy and low in fat, malai and korma dishes are creamy and high in fat .

Rice

Most restaurants serve plain pullao, a healthy version. And if one wants something more, biryani is always on the menu, there are many varieties of biryani, the chicken, shrimp and vegetable versions would be recommended over the lamb and beef, mainly for the fat content.

Vegetable dishes

All the vegetable dishes made with garbanzos, lentils, potatoes, spinach, cauliflower, onions and/or tomatoes. These are in the form of curries and if limited oil is used then they are a definite healthy addition to the menu.

Accompaniments and condiments

Raita, and all the other chutneys, like mint and tamarind, are all prepared with a variety of low calorie ingredients, and spices. The pickles and some chutneys though low in calories, may contain a lot of sodium and if a person has hypertension, then it would be a red flag.

Desserts

Are an integral part of the meal, kulfi, various versions of kheers, are all high in calories and saturated fat, and should be eaten with caution or with portion sizes in mind.

It is easy to choose a healthy meal in an Indian restaurant. The main items to watch out for are the fats, fried foods, and overeating. Portion control should not be too difficult, as very large portions are not served. Try to not over order and not overeat, but enjoy and stay healthy.

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SUMMARY

This booklet has been written to help you manage nutrition, health and diabetes and empower you with information to help prevent the early onset of complications. This is also a loud call to the adults who have the condition of diabetes to help prevent it in the next generation in their respective families, by incorporating healthy eating habits and encouraging an exercise routine for the whole family. This booklet emphasizes the importance of healthier eating habits with the Indian cuisine. Monitoring and managing blood glucose levels with this information then becomes easier. Moreover, if we guide the eating habits of our children on this cuisine from a very young age, healthy eating can become second nature to them as they grow up and can probably help them in the future when they face healthy and unhealthy food choices!!!

What are some of the unhealthy trends among our children today? Drinking a lot of soda everyday, eating a lot of high fat, high-refined carbohydrates and not maintaining good eating habits makes the everyday diet of the younger generation weak in valuable fiber and nutrients. If we do not prevent our children from developing poor eating habits (such as indiscriminate snacking, eating 'fast foods' 3-4 times or more a week and leading sedentary lifestyles from a very young age) becoming overweight follows easily and we may lose the weapon we have to prevent the onset of this disease as the next generation grows up. Bringing up our children on the Indian cuisine or managing our diabetes on this cuisine is not difficult once we know its strong points as well as its pitfalls.

The different regional cuisines in this booklet talk about their characteristics. Weekend get-togethers can often result in unhealthy eating and can become a problem. The chapter on Restaurant eating will help us, as consumers, to demand that better food be served. You can request that dhal be prepared without malai, (fat) that palak paneer be prepared with low-fat paneer, that the oils like olive or canola be used instead of hydrogenated fats, and that desserts be prepared to be more heart-healthy (see chapter on Carbohydrates and desserts). You have been given a list of food exchanges that are divided into different groups – Carbohydrates, Proteins and Fats, Dairy, Vegetables and Fruits. The Glossary will give you English equivalents to Indian terms and foods.

The Indian cuisine has many interesting ways to prepare vegetables, (like stir-frying), healthy legumes and lentils (gravies like sambaar or rajma) and even ways to cook milk and yogurt into the everyday meal (khaddi, paneer or aviyal) . This can become 'unhealthy' when consumed in excess, when whole milk instead of 1% fat milk is used to make the paneer or when just an excessive amount of foods are eaten within a day. Fresh fruits are a better alternative to canned fruits or juices as you can get valuable fiber also. It is not the single 'soda', the 'chevda' or the 'small dessert' (the chapter on desserts talks about Indian desserts) that become a problem but the total cumulative effect when the whole day's meal becomes one high in calories, simple sugars, starches or oils and fats (check out the chapter on Cholesterol and tryglycerides).

When the portions are also large, then the body is stressed to try and keep the blood glucose within optimal ranges. Conversely, when food eaten is insufficient, then a person can suffer from hypoglycemia. See below for tips on signs and symptoms of these two conditions. Here are some of the signs & symptoms of **Hyperglycemia** (when blood glucose levels are higher than the range at which the body functions optimally)) and **Hypoglycemia** (when blood glucose levels drop below this range). Remember that any of these symptoms does not necessarily mean that you have the condition. The best way to know is to test your blood glucose and consult your doctor.

Some of the Signs & Symptoms of Hyperglycemia

- Increased thirst and urination
- Weakness, pain in stomach, aching all over
- Heavy labored breathing
- Loss of appetite, nausea and vomiting
- fatigue
- large amounts of sugar in blood
- ketones in urine

What can you do?

- ✓ Call the Doctor immediately
- ✓ Take fluids without sugar if able to swallow
- ✓ Test blood glucose frequently
- ✓ Test urine for ketones

What are the causes?

- Not enough insulin
- Too much food
- Infection, fever, illness
- Emotional stress

Some of the Signs & Symptoms of Hypoglycemia

- Cold sweats, dizziness,feeling faint
- Headache
- Pounding of heart, trembling,nervousness
- Blurred vision
- Hunger
- Inability to awaken
- Personality changes

What can you do?

- ✓ Take Glucose tablets or orange juice
- ✓ Check blood glucose levels
- ✓ Do not give insulin
- ✓ Do not give anything by mouth if unconscious
- ✓ Give glucagons according to package instructions

What are the causes?

- Too much insulin
- Not enough food
- Unusual amount of exercise
- Delayed meals

How can you avoid Hyperglycemia or Hypoglycemia?

Consult your Doctor and work with your dietitian. Your dietitian can recommend a diet suited to your lifestyle and preferences. She/he can also show you the amounts — of calories, carbohydrates, fats & proteins you are consuming presently,if you give him/her the information of the exact amounts consumed. So keeping a food record is a useful tool

Summary of some of the tips on Blood Glucose Management

There is no diet known as a 'diabetes diet' and no special foods are necessary. The Introduction explains how the body regulates blood glucose in the blood both from the foods we eat and from the glucose it makes breaking down other nutrients like fats and proteins. Ask your doctor what the optimal range of blood glucose for you should be and try to keep your blood glucose within this range. Foods available in the supermarket can be used and can be eaten but with the information and awareness, you can combine healthy foods in appropriate amounts so that the insulin produced by your body (along with any other medication that is prescribed by your Medical Provider) will help your body use the foods you eat and keep the blood glucose (or 'blood sugar' as it is commonly called) within the Doctor-prescribed range.

Here are some tools that can help you achieve this goal:

1. Keep a record of foods and the approximate amounts till you get a good working knowledge with the help of your Medical Provider and a Registered Dietitian.
2. Use heart-healthy fats and oils – monounsaturated oils like olive oil, canola oil have been found to be healthy. If you use ghee, keep it to a minimum and for occasional use but also count it in your total daily fat allowance.
3. Include plenty of fresh or cooked vegetables (stir-fried with 1-2 tsps of oil to season for 3-4 cups of vegetables is recommended). The eating patterns of some regions talks about the small quantity of vegetables used. This is where the eating patterns can be improved. While stir-frying vegetable,use the spices, garlic, onion, coriander etc of this cuisine) to improve taste instead of increasing fats & oils (this is one of the benefits of this cuisine).
4. Try to avoid 'feasting' and 'fasting'. If you fast, make sure that you have a good balanced meal before and after a 'fast'.
5. Make sure you include 6-8 cups of water everyday. Try to avoid soda or juices as a beverage substitute for water especially for young children as this can become a habit that is tough to break!
6. 3-4 cups of vegetables (without much oil) and fruits with whole grain cereals can help make sure that the bowels are 'regular' for you and the whole family!
7. Avoid excess salt while garnishing foods.
8. Foods like ginger, onion, garlic, cumin seeds, fenugreek seeds, fennel seeds, dhals, curry leaves, coriander leaves etc have been recommended in Ayurveda and can continue to be included as always.
9. Include an exercise program like yoga (after you check this out with your Medical Provider) everyday or at least 3-4 times a week.
10. Try and use brown rice as it has more fiber.

There are bibliographies at the end of almost every chapter that can give you additional information. We have also tried to include some translations at the end. A useful reference to keep is the number to the American Dietetic Association (800-877-1600 ext. 5000) or the e-mail address(www.eatright.org). This organization can direct you to resources and qualified professionals to help you empower yourself with helpful information on eating and on how to manage your diabetes and blood glucose levels.

More Information on Body Mass Risk Assessment and Physical Activity

Key Recommendations (From the Expert Panel on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults)

Weight loss is advised to lower elevated blood pressure in overweight and obese persons with high blood pressure. Weight loss is also suggested to lower elevated levels of total cholesterol, LDL-cholesterol, and triglycerides, and to raise low levels of HDL-cholesterol in overweight and obese persons with dyslipidemia. Weight loss is effective to lower elevated blood glucose levels in overweight and obese persons with type 2 diabetes. Use the BMI to assess overweight and obesity. Body weight alone can be used to follow weight loss, and to determine the effectiveness of therapy. The BMI is used to classify excess weight and obesity and to estimate relative risk of disease compared to normal weight. The waist circumference should be used to assess abdominal fat content. The initial goal of weight loss therapy should be to reduce body weight by about 10 percent from the baseline. With success, and if warranted, further weight loss can be attempted. Weight loss should be gradual and around 1 to 2 pounds per week for a period of 6 months, with subsequent strategy based on the amount of weight lost. Low calorie diets (LCD) are used for weight loss in overweight and obese persons. Reducing fat as part of an LCD is a practical way to reduce calories. Reducing dietary fat alone without reducing calories is not sufficient for weight loss. However, reducing dietary fat, and with reducing dietary carbohydrates, can help reduce calories. A diet that is individually planned to help create a deficit of 500 to 1,000 kcal/day should be an intregal part of any program aimed at achieving a weight loss of 1 to 2 pounds per week. Physical activity should be part of a comprehensive weight loss therapy and weight control program because it: (1) modestly contributes to weight loss in overweight and obese adults, (2) may decrease abdominal fat, (3) increases cardiorespiratory fitness, and (4) may help with maintenance of weight loss. Physical activity should be an integral part of weight loss therapy and weight maintenance. Initially, moderate levels of physical activity for 30 to 45 minutes, 3 to 5 days a week, should be encouraged. All adults should set a long-term goal to accumulate at least 30 minutes or more of moderate-intensity physical activity on most, and preferably all, days of the week. The combination of a reduced calorie diet and increased physical activity is recommended since it produces weight loss that may also result in decreases in abdominal fat and increases in cardiorespiratory fitness. Behavior therapy is a useful adjunct when incorporated into treatment for weight loss and weight maintenance. Weight loss and weight maintenance therapy should employ the combination of LCD's, increased physical activity, and behavior therapy. After successful weight loss, the likelihood of weight loss maintenance is enhanced by a program consisting of dietary therapy, physical activity, and behavior therapy and this should be continued. Drug therapy can also be used with a Doctor's guidance. However, drug safety and efficacy beyond 1 year of total treatment have not been established. A weight maintenance program should be a priority after the initial 6 months of weight loss therapy.

Part 1: Assessing Your Risk

According to the NHLBI guidelines, assessment of excess weight involves using three key measures:

- **body mass index (BMI)**
- **waist circumference, and**
- **risk factors for diseases and conditions associated with obesity.**

The BMI is a measure of your weight relative to your height and waist circumference measures abdominal fat. Combining these with information about your additional risk factors yields your risk for developing obesity-associated diseases.

What is Your Risk?

1. Body Mass Index (BMI)

BMI is a reliable indicator of total body fat, which is related to the risk of disease and death. The score is valid for both men and women but it does have some limits. The **limits** are:

- It may **overestimate** body fat in athletes and others who have a muscular build.
- It may **underestimate** body fat in older persons and others who have lost muscle mass.

Use the BMI **calculator <http://www.nhlbisupport.com/bmi/bmicalc.htm>** or **tables** to estimate your total body fat. The BMI score in the following shows how to rate the weight status.

FOR INDIANS Normal BMI is <23

	BMI
Underweight	Below 18.5
Normal	18.5 - 24.9
Overweight	25.0 - 29.9
Obesity	30.0 - 30.9
Morbid Obesity	40 & above

2. Waist Circumference

Determine your waist circumference by placing a measuring tape snugly around your waist. It is a good indicator of your abdominal fat (another predictor of your risk for developing risk factors for heart disease and other diseases). This risk increases with a waist measurement of over 40 inches in men and over 35 inches in women

The table, **Risks of Obesity-Associated Diseases by BMI and Waist Circumference, <bmi_dis.htm>** provides you with an idea of whether your BMI combined with your waist circumference increases your risk for developing obesity associated diseases or conditions.

3. Other Risk Factors

Besides being overweight or obese, there are additional risk factors to consider.

Risk Factors

High blood pressure (hypertension), high LDL-cholesterol ("bad" cholesterol) low HDL-cholesterol ("good" cholesterol), high triglycerides, high blood glucose, (sugar) family history of premature heart disease, physical inactivity and cigarette smoking.

4. Assessment

For people who are considered obese (BMI greater than or equal to 30) or those who are

overweight (BMI of 25 to 29.9) and have two or more risk factors, the guidelines recommend weight loss. Even a small weight loss (just 10 percent of your current weight) will help to lower your risk of developing diseases associated with obesity. Patients who are overweight, but do not have a high waist measurement, and have less than 2 risk factors may need to prevent further weight gain rather than lose weight.

Talk to your doctor to see if you are at an increased risk and if you should lose weight. Your doctor will evaluate your BMI, waist measurement, and other risk factor for heart disease. People who are overweight or obese have a greater chance of developing high blood pressure, high blood cholesterol or other lipid disorders, type 2 diabetes, heart disease, stroke, and certain cancers. Even a small weight loss (just 10 percent less than current weight) will help to lower the risk of developing those diseases.

Guide to Physical Activity

An increase in physical activity is an important part of your weight management program. Most weight loss occurs because of decreased caloric intake. Sustained physical activity is most helpful in the prevention of weight regain. In addition, exercise has a benefit of reducing risks of cardiovascular disease and diabetes, beyond that produced by weight reduction alone. Start exercising slowly, and gradually increase the intensity. Trying too hard at first can lead to injury.

Examples of moderate amounts of physical activity

Common Chores	Sporting Activities
Washing and waxing a car for 45-60 minutes	Playing volleyball for 45-60 minutes
Washing windows or floors for 45-60 minutes	Playing touch football for 45 minutes
Gardening for 30-45 minutes	Walking 1 and 3/4 miles in 35 minute (20min/mile)
Wheeling self in wheelchair 30-40 minutes	Basketball (shooting baskets) 30 minutes
Pushing a stroller 11/2 miles in 30 minutes	Bicycling 5 miles in 30 minutes
Raking leaves for 30 minutes	Dancing fast (social) for 30 minutes
Walking 2 miles in 30 minutes (15min/mile)	Water aerobics for 30 minutes
Shoveling snow for 15 minutes	Swimming Laps for 20 minutes
Stairwalking for 15 minutes	Basketball (playing game) for 15-20 minutes
	Bicycling 4 miles in 15 minutes
	Jumping rope for 15 minutes
	Running 1and 1/2 miles in 15 min. (10min/mile)

Your exercise can be done all at one time, or intermittently over the day. Initial activities may be walking or swimming at a slow pace. You can start out by walking 30 minutes for three days a week and can build upto 45 minutes of more intense walking, at least five days a week. With this regimen, you can burn 100 to 200 calories more per day. All adults should set a long-term goal to accumulate at least 30 minutes or more of moderate-intensity physical activity on most, and preferably all, days of the week. This regimen can be adapted to other forms of physical activity, but walking is particularly attractive because of its safety

and accessibility. Also, try to increase "every day" activity such as taking the stairs instead of the elevator. Reducing sedentary time is a good strategy to increase activity. Start by undertaking frequent, less strenuous activities. With time, you may be able to engage in more strenuous activities. Competitive sports, such as tennis and volleyball, can provide an enjoyable form of exercise for many. Care must be taken to avoid injury. Check with your Medical Practitioner before starting a physical activity regimen.

Activity Progression

For the beginner, activity level can begin as very light and would include an increase in standing activities, special chores like room painting, pushing a wheelchair, yard work, ironing, cooking, and playing a musical instrument.

The next level would be light activity such as slow walking of 24 min/mile, garage work, carpentry, house cleaning, childcare, golf, sailing, and recreational table tennis.

The next level would be moderate activity such as walking 15 minute/mile, weeding and hoeing a garden, carrying a load, cycling, skiing, tennis, and dancing.

High activity would include walking 10 minute/mile or walking with load uphill, tree felling, heavy manual digging, basketball, climbing, or soccer/kick ball.

You may also want to try

- flexibility exercise to attain full range of joint motion
- strength or resistance exercise
- aerobic conditioning

http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/phy_act.htm

Body Mass Index, Assessing your Risk and Guide to Physical Activity: "Source: National Heart, Lung, and Blood Institute".

Some Important links:

http://www.nhlbisupport.com/bmi/
www.va.gov/diabetes
http://www.hhs.gov/topics/diabetes.html
http://ndep.nih.gov/
http://www.diabetes.org/main/application/commercewf
http://www.diabetesnet.com/
http://www.aadenet.org/
http://www.joslin.harvard.edu/education/library/index.shtml
http://www.eatright.org/
http://ndep.nih.gov/get-info/dpi.htm

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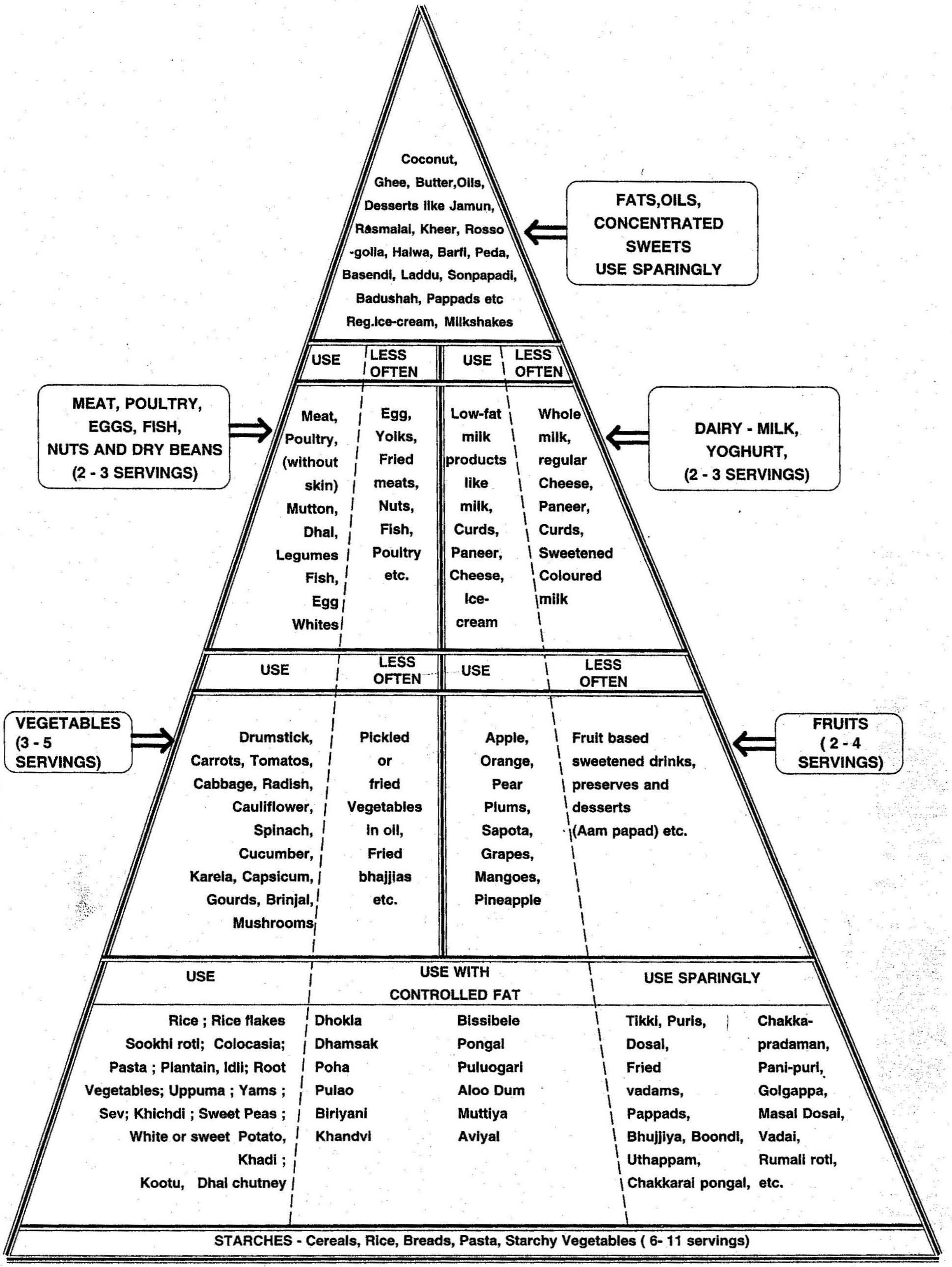
Body Mass Index Table

	Normal						Overweight					Obese										Extreme Obesity														
BMI	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**
Height (inches)																		**Body Weight (pounds)**																		
58	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172	177	181	186	191	196	201	205	210	215	220	224	229	234	239	244	248	253	258
59	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178	183	188	193	198	203	208	212	217	222	227	232	237	242	247	252	257	262	267
60	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199	204	209	215	220	225	230	235	240	245	250	255	261	266	271	276
61	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190	195	201	206	211	217	222	227	232	238	243	248	254	259	264	269	275	280	285
62	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295
63	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220	225	231	237	242	248	254	259	265	270	278	282	287	293	299	304
64	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227	232	238	244	250	256	262	267	273	279	285	291	296	302	308	314
65	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234	240	246	252	258	264	270	276	282	288	294	300	306	312	318	324
66	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241	247	253	260	266	272	278	284	291	297	303	309	315	322	328	334
67	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249	255	261	268	274	280	287	293	299	306	312	319	325	331	338	344
68	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256	262	269	276	282	289	295	302	308	315	322	328	335	341	348	354
69	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243	250	257	263	270	277	284	291	297	304	311	318	324	331	338	345	351	358	365
70	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376
71	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279	286	293	301	308	315	322	329	338	343	351	358	365	372	379	386
72	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287	294	302	309	316	324	331	338	346	353	361	368	375	383	390	397
73	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295	302	310	318	325	333	340	348	355	363	371	378	386	393	401	408
74	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303	311	319	326	334	342	350	358	365	373	381	389	396	404	412	420
75	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399	407	415	423	431
76	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320	328	336	344	353	361	369	377	385	394	402	410	418	426	435	443

Source: Adapted from *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report.*

FOOD GUIDE PYRAMID

A Guide to Daily Food Choices



Note : FOODS ARE BEST USED WHEN COOKED TO BE HEART-HEALTHY (i.e. controlled fats, sugars and salt) Watch portions !

Adapted from the USDA Food Pyramid and The Ethnic and Regional Food Practices on the Indian - Pakistani Cuisine by the Am. Diet Association and the Am. Diabetic Association, 1996

EXCHANGE LISTS FOR INDIANS WITH DIABETES

What are Exchange Lists?

Exchange lists are foods listed together under different food groups because each serving of a food has about the same amount of carbohydrate, protein, fat, and calories as the other foods on that list. Carbohydrates are found in mainly foods rich in starches and sugars, proteins are found mainly in meats, poultry, seafood, eggs, dairy and legumes and fats and oils are found mainly in butter, hydrogenated fats, margarine and all oils. Carbohydrates, proteins and fats yield calories and a person with diabetes must make sure that there is no overload of any or all of these nutrients in a day's meal. That is why with an Exchange List, any food on the list can be exchanged or traded for any other food on the same list. Exchange lists and a meal plan can help you make healthy choices. There are three main groups - the Carbohydrate group, the Meat and Meat substitute group, and the Fat group. Foods in fat group are divided into monounsaturated, polyunsaturated, and saturated fats.

FOOD GROUP

1 STARCH EXCHANGE (15 gms Carbohydrate, 3 gms protein, 0-1 gm fat, and 80 calories)

FOOD	PORTION	FOOD	PORTION
Aviyal	½ cup	Bran cereal	½ cup
Bagel	½ (1 oz)	Bulgur	½ cup
Bread	1 slice (1 oz)	Cereals	½ cup
Bread sticks (4" long)	2 (2/3 oz)	Cornmeal	3 Tbsp
English muffin	½	Couscous	1/3 cup
Hot dog or hamburger bun	½ (1 oz)	Flour	3 Tbsp
Idli, plain	3" round	Granola, low fat	¼ cup
Naan	¼ of 8"x2"	Grape-Nuts	¼ cup
Pita (6")	½	Grits	½ cup
Phulka/sookhi roti/ chapati	1 (6")	Mumra (puffed rice)	1 ½ cup
Plain Dosa	1	Kasha	½ cup
Plantain, green	1/3 cup	Millet	¼ cup
Raisin bread	1 slice (1 oz)	Muesli	¼ cup
Rice, plain, cooked, wh/br	1/3 cup	Oats	½ cup
Roll, plain, small	1 (1oz)	Pasta	½ cup
Roti (bajra, corn, juwar)	½ (6")	Puffed cereal	1 ½ cup
Sambar	½ cup	Rice milk	½ cup
Tortilla, corn/flour (6-8")	1	Rice vermicelli	½ cup
Waffle (4 ½" low fat)	1	Wheat germ	3 Tbsp
Starchy Vegetables:		Crackers and Snacks:	
Baked beans	1/3 cup	Animal crackers	8
Corn	½ cup	Graham crackers	3
Corn on cob	1 (5 oz)	Matzoh	¾ oz
Mixed vege (corn, peas)	1 cup	Melba toast	4 slices
Peas, green	½ cup	Oyster crackers	24
Plantain	½ cup	Popcorn (no fat)	3 cups
Potato, baked or boiled	1 small	Pretzels	¾ oz
Potato, mashed	½ cup	Rice cakes (4")	2

Potato subji (low fat)	½ cup	Whole wheat crackers	¾ oz
Squash, winter	1 cup	Saltine crackers	6
Yam, sweet potato, plain	½ cup	Chips (fat free)	¾ oz

1 STARCH + 1 FAT **1 STARCH+ 1 VERY LEAN MEAT**

(15 gms carbohydrate, 3 gms protein, 0-1 gm fat, and 80 calories.)

FOOD	PORTION	FOOD	PORTION
Biscuit (2 ½")	1	Beans and peas	½ cup
Chow mein noodles	½ cup	(garbanzo, pinto,	
Corn bread (2")	1 (2 oz)	kidney, white, split	
Crackers, butter type	6	black-eyed)	
Croutons	1 cup	Lima beans	2/3 cup
French fried potatoes	16-25 (3 oz)	Lentils	½ cup
Granola	¼ cup	Miso	3 Tbsp
Muffin, small	1 (1 ½ oz)	Tomato dhal	½ cup
Pancake (4")	2	Toor dhal, ckd	½ cup
Popcorn, microwave	3 cups	Rasam	1 cup
Puries	2 (5")	Mung dhal, ckd	½ cup
Paratha or Thepala	1 (6")		
Dhansak	½ cup		
Dhokla	1 "Square		
Poha	1 cup		
Matki usal	½ cup		
Sandwich crackers (cheese)	3		
Stuffing, bread	1/3 cup		
Taco shell (6")	1		
Waffle (4 ½")	1		

FRUIT EXCHANGE: 15 gms carbohydrate and 60 calories.

Apple, small, unpeeled	1 (4 oz)	Peach, medium, fresh	1 (6 oz)
Applesauce, unsweetened	½ cup	Peaches, canned	½ cup
Apples, dried	4 rings	Pear, large, fresh	½
Apricots, fresh	4 whole	Pears, canned	½ cup
Apricots, dried	8 halves	Pineapple, fresh	¾ cup
Apricots, canned	½ cup	Pineapple, canned	½ cup
Banana, small	1 (4 oz)	Plums, small	2
Blackberries	¾ cup	Plums, canned	½ cup
Blueberries	¾ cup	Prunes, dried	3
Cantaloupe, cubes	1 cup	Raisins	2 Tbsp
Cherries, fresh	12 (3 oz)	Rasberries	1 cup
Cherries, canned	½ cup	Sapota (chiku)	1 med
		Seetaphal	1 med
		Strawberries, whole	1 ¼ cup
Dates	3	Tangerines, small	2 (8oz)
Figs, fresh	2 medium	Watermelon, 1 slice or	1 ¼ cup
Figs, dried	1 ½		
Fruit cocktail	½ cup	Fruit Juice:	

Grapefruit, canned	¾ cup	Apple juice/cider	½ cup
Grapes, small	17 (3 oz)	Cranberry juice	1/3 cup
Guava, medium	1 ½	Cranberry cocktail (reduced calories)	1 cup
Honeydew melon, cubes	1 cup	Guava juice	½ cup
Jambu	6	Mango juice	1/3 cup
Kiwi, medium	1	Grape juice	½ cup
Loquat	4	Mixed juices, 100%	1/3 cup
Mandarin oranges, canned	¾ cup	Orange juice	½ cup
Mango, small	½ or ½ cup	Pineapple juice	½ cup
Nectarine, small	1 (5 oz)	Prune juice	1/3 cup
Orange, small	1		
Papaya, cubes	1 cup		
Passion fruit	½ med		

VEGETABLE EXCHANGE: 5 gms carbohydrate, 2 gms protein, 0 gm fat, and 25 calories per ½ cup cooked (100 gms) or 1 cup raw vegetables.

Artichoke
Artichoke hearts
Asparagus
Bamboo shoots
Beans (green, wax, Italian)
Bean sprouts (mung)
Beets (chukandar)
Bottle gourd (lauki)
Broad beans (papdi)
Broccoli
Brussels sprouts
Cabbage
Carrots
Cauliflower (gobi)
Celery
Cluster beans (guvar)
Cow pea pods
Cucumber
Dill (suva bhaji)
Drumsticks (surgavo)
Eggplant (brinjal)
Fenugreek leaves (methi)
Green Onions or scallions
Green Papaya
Greens (collard, kale, mustard, turnip)
Karela (bittermelon)
Kankoda (golkandra)
Kohlrabi
Leeks
lettuce
Mixed vegetables
Mushrooms
Okra (lady's fingers)
Onions
Parwar
Pea pods
Peppers
Pink beans (valore)
Radish
Ridge gourd (torai or turia)
Salad greens
Sauerkraut
Spinach (palak)
Summer squash
Taro leaves
Taro roots
Tomatoes, fresh, canned, sauce
Turnip
Water chestnuts
Watercress
Zucchini

Vegetable Juices:
Carrot juice
Tomato juice
Vegetable, mixed juice

Meat and Meat Substitutes

Very Lean: 7 gms protein, 0-1 gm fat, 0 gm carbohydrate, and 35 calories.

Chicken or turkey (no skin)	1 oz
Fish	1 oz
Shellfish (crab, lobster, shrimp)	1 oz
Game	1 oz
Goat meat	1 oz
Egg white	2
Egg substitutes	¼ cup
Cheese, fat free	1 oz
Cooked dhal or legumes	½ cup
Paneer, 1% milk	¼ cup

Lean Meat 7 gms protein, 3 gms fat, 0 carbohydrate, and 55 calories.

Beef, select or choice grade	1 oz
Baked/Tandoori chicken (no skin)	1 oz
Chicken (skinless)	1 oz
Pork, lean	1 oz
Lamb	1 oz
Veal, lean	1 oz
Turkey (skinless)	1 oz
Fish, fresh or canned	1 oz
Ground meat kabab	1 oz
Oysters	6
Sardines	2
Cottage cheese, 4.5% fat	¼ cup
Parmesan, grated	2 Tbsp

Medium-Fat Meat: 7 gms protein, 5 gms fat, 0 carbohydrate, and 75 calories.

Beef, prime grades	1 oz
Pork	1 oz
Veal cutlet	1 oz
Chicken with skin	1 oz
Chicken, fish, lamb Tikka	3x1" pieces
Fish, fried	1 oz
Cheese, Feta, mozzarella, ricotta	1 oz
Egg	1
Soy milk	1 cup
Tempeh	¼ cup
Tofu	2 oz

High-Fat Meat: 7 gms proteitn, 8 gms fat, 0 gm carbohydrate, and 100 calories.

Pork, spareribs, sausage, ground	1 oz
Cheese, all regular cheeses	1 oz
Processed sandwich meats	1 oz
Hot dog	1
Bacon	3 slices
Peanut butter	2 Tbsp
Paneer , regular	¼ cup

Milk Exchange: 12 gms carbohydrate, and 8 gms protein.

Skim and very low fat milk (0-3 gms fat)

FOOD	PORTION
Skim milk	1 cup
½% milk	1 cup
1% milk	1 cup
Nonfat buttermilk	1 cup
Evaporated skim milk	½ cup
Nonfat dry milk	⅓ cup
Plain nonfat yogurt	¾ cup
Fruit flavored yogurt (non-fat, sugar free)	1 cup
Lassi, non-fat, sugar free	1 cup
Paneer, 1% milk	1 oz
Masala Tea, with 1% milk	1 cup

Low fat (5 gm fat)

2% milk	1 cup
Plain low fat yogurt	¾ cup
Sweet acidophilus milk	1 cup

Whole milk (8 gms fat)

FOOD	PORTION
Whole milk	1 cup
Evaporated whole milk	½ cup
Goat's milk	1 cup
Kefir	1 cup
Lassi, regular	1 cup

Fat Exchange : 5 gms fat and 45 calories.

Monounsaturated Fats:

Avocado, medium	1/8 (1 oz)
Oil, canola, olive, peanut	1 tsp
Olives	8 large
Nuts	
Almonds, cashews	6
Mixed	6
Peanuts	10
Pecans	4 halves
Peanut butter	2 tsp
Sesame seeds	1 Tbsp
Tahini paste	2 tsp

Polyunsaturated Fats:

Margarine, stick, tub	1 tsp
Mayonnaise, regular	1 tsp
Mayonnaise, reduced fat	1 Tbsp
Nuts, walnuts	4 halves
Oils, corn, safflower, soy	1 tsp
Salad dressing, regular	1 Tbsp
Salad dressing, low fat	2 Tbsp
Miracle whip, regular	2 tsp
Miracle whip, low fat	1 Tbsp
Seeds, pumkin, sunflower	1 Tbsp

Saturated Fats*:

Bacon, cooked	1 slice
Bacon, grease	1 tsp
Butter, stick	2 tsp
whipped	1 Tbsp
reduced fat	2 Tbsp
Ghee, clarified butter	1 tsp
Coconut	2 Tbsp
Half and half cream	2 Tbsp
Cream cheese, regular	1 Tbsp
reduced fat `	2 Tbsp
Shortening or lard	1 tsp
Sour cream, regular	2 Tbsp
reduced fat	3 Tbsp

*Saturated fats can raise blood cholesterol levels.

Other Carbohydrate List: Sweets and Snacks

Many of these foods are concentrated source of carbohydrate and fat. Always check Nutrition Facts on the food label. It will be most accurate source of information.

1 carbohydrate or starch exchange = 15 gms of carbohydrate = 60 calories:

1 protein exchange = 7 gms protein = 28 calories; 1 fat exchange = 5 gms fat = 45 calories.

(1 gm carbohydrate = 4 calories; 1 gm protien = 4 calories; 1 gm fat = 9 calories)

Food	Portion	Exchange per serving
Angel food cake, unfrosted	1/12 the cake	2 carbohydrates
Banana chips	1 oz	1 carbohydrate, 2 fats
Bhel puri	1 oz	1 carbohydrate, 1 fat
Bhujjia	1 oz	1 carbohydrate, 1 fat
Brownie, small	2" square	1 carbohydrate, 1 fat
Cake, unfrosted	2" square	1 carbohydrate, 1 fat
Cookies, fat-free	2 small	1 carbohydrate
Sandwich cookie with cream	2 small	1 carbohydrate, 1 fat
Cauliflower Bhajia	2 pieces	1 carbohydrate, 1 fat
Chevda mix	1 oz	1 carbohydrate, 1 fat
Chhunda (mango pickle)	2 Tbsp	1 carbohydrate
Chutney, tamarind	2 Tbsp	1 carbohydrate
Cranberry sauce, jellied	¼ cup	1 ½ carbohydrates
Cupcake, frosted	1 small	2 carbohydrates, 1 fat
Dahi vadai, non fat yogurt	2 pieces	1 carbohydrate, 1 fat
Doughnut, plain cake	1 medium	1 ½ carbohydrate, 2 fats
Doughnut, glazed	2 oz	2 carbohydrates, 2 fats
Fruit juice bars, 100%, frozen	1 bar (3 oz)	1 carbohydrate
Fruit snack, chewy	1 roll	1 carbohydrate
Fruit spread, 100%	1 Tbsp	1 carbohydrate
Gelatin, regular	½ cup	1 carbohydrate
Ghari, no ghee topping	1	1 carbohydrate, 2 fats
Gingersnaps	3	1 carbohydrate
Granola bar	1 bar	1 carbohydrate, 1 fat
Granola bar, fat-free	1 bar	2 carbohydrates
Gulabjammun	2 med	2 carbohydrate, 2 fats, ½prot
Halwa, carrot and milk	1 piece	1 carbohydrate, 1 fat, 1 prot
Halwa, sooji and milk	¼ cup	1 carbohydrate, 1 fat, ½prot
Handava	1 small piece	1 carbohydrate, 1 fat
Hummus	⅓ cup	1 carbohydrate, 1 fat
Ice cream	½ cup	1 carbohydrate, 2 fats
Ice cream, light	½ cup	1 carbohydrate, 1 fat
Ice cream, fat-free, no sugar	½ cup	1 carbohydrate
Jam or jelly, regular	1 Tbsp	1 carbohydrate
Kachories, vegetable	2	2 carbohydrate, 2 fats
Kachories, mungdhal	2	2 carbohydrate, 2 fats
Kadhi	1 cup	1 carbohydrate, 1fat, 1 prot
Khandavi	6 pieces	1 carbohydrate, 1 fat, ½ prot
Khichadi, no ghee	½ cup	1 carbohydrate, ½ prot

Kulfi	½ cup	1 carbohydrate, 1 fat
Kheer	½ cup	2 carbohydrate, 3 fat, 1/2 prot
Laddoo, wheat	1 small	2 carbohydrate, 2 fats
Magas	1 ½"x 1 ½"	1 carbohydrate, 1 fat, 1 prot
Mathia	2 thin	1 carbohydrate, 2 fats
Milk, chocolate, whole	1 cup	2 carbohydrates, fat
Mohanthal	1 ½" x1 ½"	1 carbohydrate, 1 fat, 1 prot
Muthia, dudhi + wheat flour	4 pieces	2 carbohydrate, 1 fat
Namkeen (snack mix)	½ cup	1 carbohydrate, 2 fats
Nankhatai	2 small	1 carbohydrate, 1 fat
Pakoda, spinach	3 piece	1 carbohydrate, 1 fat
Pani puri	6	1 carbohydrate, 1 fat
Papad	2	1 carbohydrate
Pav bhaji, small	3 oz	1 carbohydrate, 1 fat
Petha, pumkin	2" piece	2 carbohydrates
Pie, fruit, 2 crust	⅙ pie	3 carbohydrates, 2 fats
Pie, pumpkin or custard	⅛ pie	1 carbohydrate, 2 fats
Pizza, cheese, thin crust	¼ of 10"	2 carbohydrates, 2 med fat Meats, 1 fat
Potato chips	12-18 (1oz)	1 carbohydrate, 2 fats
Potato Paratha	1 (6")	1 carbohydrate, 2 fats
Pudding, regular low fat milk	½ cup	2 carbohydrates
Pudding, sugar-free, low fat milk	½ cup	1 carbohydrate
Rasagolla	2 med	2 carbohydrate, 1 fat, 1 prot
Rasmalai, in reg milk	2 small	2 carbohydrate, 2 fats, 2 prot
Salad dressing, fat free	¼ cup	1 carbohydrate
Samosa, vegetable	1	1 ½ carbohydrate, 1 fat
Sherbet, sorbet	½ cup	2 carbohydrates
Shrikhand	¼ cup	1 carbohydrate, 1-2fat, 1 prot
Spaghetti, pasta sauce, canned	½ cup	1 carbohydrate, 1 fat
Sweet Roll or Danish	1 (2 ½ oz)	2 1/2 carbohydrates, 2 fat
Syrup, light	2 Tbsp	1 carbohydrate
Syrup, regular	1 Tbsp	1 carbohydrate
Syrup, regular	¼ cup	4 carbohydrates
Tortilla chips	6-12 (1 oz)	1 carbohydrate, 2 fats
Undhiyu, with 1 tsp oil	½ cup	1 carbohydrate, 1 fat
Uppuma, with 1 tsp oil	⅓ cup	1 carbohydrate, 1 fat
Uttapam, vege	1 small	2 carbohydrate, 1 fat
Vanilla wafers	5	1 carbohydrate, 1 fat
Vegetable cutlet	1 med	1 carbohydrate, 1/2 fat
Yogurt, frozen, low-fat, fat free	⅓ cup	1 carbohydrate, 0-1 fat
Yogurt, frozen, fat free, no sugar	½ cup	1 carbohydrate
Yogurt, low-fat, with fruit	1 cup	3 carbohydrates, 0-1 fat
Free Foods:		
Coriander chutney	1 tsp	100 mg sodium (Nirav)
Salsa	2 Tbsp	450 mg sodium (Taco bell)
Marinated chillies	1	

Follow American Dietetic Association Inc and The American Diabetes Association's Exchange lists for Meal Planning for the following lists:
Free foods list
Drinks
Condiments
Seasonings

Combination foods list

Fast foods list

Sodium content of some of the foods on this exchange lists

Avoid canned, cured, ready to eat and processed foods for sodium/salt restricted diets.

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References

1. Exchange Lists for Meal Planning. American Diabetes Association, Inc. and The American Dietetic Association. 1995.
2. Diabetes Meal Planning for Indian and Pakistani clients. The American Dietetic Association.
3. Patel, C and Denny, M. Cultural Foods and Renal Diets- A Multilingual Guide for Renal Patients, Section II, Council on Renal Nutrition of Northern California, NKF. Second Edition, 1997.

GLOSSARY

Alcohol - An ingredient in a variety of beverages, including beer, wine, liquers, cordials, and mixed or straight drinks. Pure alcohol itself yields about 7 calories per gram.

Blood Glucose - The main sugar that the body makes from the three elements of food - proteins, fats, and carbohydrates - but mostly from carbohydrates. Glucose is the major source of energy for living cells and is carried to each cell through the bloodstream. However, the cells cannot use glucose without the help of insulin.

Benecol - A type of plant based margarine that helps lower blood cholesterol level.

Calorie - A unit used to express the heat or energy value of food. Calories come from carbohydrate, protein, fat, and alcohol.

Carbohydrate - One of the three major energy sources in foods. The most common carbohydrates are sugars and starches. Carbohydrates are found in foods from the Milk, Vegetable, Fruit and Starch exchange lists.

C.D.E. (Certified Diabetes Educator) - A health care professional who is qualified by the American Association of Diabetes Educators to teach people with diabetes how to manage their condition.

Cholesterol - A fat-like substance normally found in blood. A high level of cholesterol in the blood has been shown to be a major risk factor for developing heart disease. Dietary cholesterol is found in all animal products, but is especially high in egg yolks and organ meats. Eating foods high in dietary cholesterol and saturated fat tends to raise the level of blood cholesterol. Foods of plant origin such as fruits, vegetables, grains, and beans, peas, and lentils contain no cholesterol. Cholesterol is found in foods from the Milk, Meat, and Fat exchange lists.

Chronic - Present over a long period of time. Diabetes is an example of chronic disease.

Exchange lists - A grouping of foods by type to help people on special diets stay on the diet. Each group Lists measured amounts of foods with in the group may be exchanged or traded in planning meals. A single exchange contains approximately equal amounts of carbohydrate, protein, fat, and calories.

Fasting blood glucose test - A method for finding out how much glucose (sugar) is in the blood. The test can show if the person has diabetes. A blood sample is taken in lab or doctor's office. The test is usually done in the morning before the person has eaten.

Fat - One of the three major energy sources in food. A concentrated source of calories- about 9 calories per gram. Fat is found in foods from the Fat and Meat lists. Some kinds of milk also have fat; some foods from the Starch list also contain fat.

***Saturated fat -** Type of fat that tends to raise blood cholesterol levels. It comes primarily from animals and is usually hard at room temperature. Examples of saturated fats are butter, lard, meat fat, solid shortening, palm oil, and coconut oil.

***Polyunsaturated fat -** Type of fat this is liquid at room temperature and is found in vegetable oils. Safflower, sunflower, corn, and soybean oils contain the highest amounts of polyunsaturated fats. Polyunsaturated fats, such as corn oil, can help lower high blood cholesterol levels when they are part of a healthful diet.

***Monounsaturated fat -** Type of fat that is liquid at room temperature and is found in vegetable oils, such as canola and olive oils. Monounsaturated fats can help lower high blood cholesterol levels when they are part of a lower-fat diet.

Fiber - An indigestible part of certain foods. Fiber is important in the diet as roughage, or bulk. Fiber is found in foods from the Starch, Vegetable, and Fruit exchange lists.

Gram - A unit of mass and weight in the metric system. An ounce is about 30 grams.

Lipid - A term for fat. The body stores fat as energy for future use just like a car that has a reserve fuel tank. When the body needs energy, it can break down the lipids into fatty acids and burn them like glucose (sugar).

Meal Plan - A guide showing the number of food exchanges to use in each meal and snack to control distribution of carbohydrates, proteins, fats, and calories throughout the day.

Mineral - Substance essential in small amounts to build and repair body tissue and/or control functions of the body. Calcium, iron, magnesium, phosphorus, potassium, sodium, and zinc are minerals.

Non calorie sweetener - A man made sweetener that people use in place of sugar because it has no calories. Ex- Saccharin, equal , splenda

Nutrient - Substance in food necessary for life. Carbohydrates, proteins, fats, minerals, vitamins, and water are nutrients.

Obesity - When people have 20 percent (or more) extra body fat for their age, height, sex, and bone structure. Fat works against the action of insulin. Extra body fat is thought to be a risk factor for diabetes.

Protein - One of the three major nutrients in food. Protein provides about 4 calories per gram. Protein is found in foods from the Milk and Meat exchange lists. Smaller amounts of protein are found in foods from the Vegetable and Starch lists.

Registered Dietitian - A registered dietitian is a food and nutrition expert who has met the minimum academic and professional requirements to qualify for the credential "RD". RD is recognized by the medical profession as the primary provider of nutritional care, education, and counseling. The initials RD after a dietitian's name ensures that he or she has met the standards of The American Dietetic Association. Look for these credentials when you seek advice on nutrition.

Sodium - A mineral needed by the body to maintain life, found mainly as a component of salt. Many individuals need to cut down the amount of sodium (and salt) they eat to help control high blood pressure.

Starch - One of the two major types of carbohydrate. Foods consisting mainly of starch come from the Starch list.

Sugars - One of the two major types of carbohydrate. Foods consisting mainly of naturally present sugars are those from the Milk, Vegetables, and Fruit lists. Added sugars include common table sugar and the sugar alcohols (sorbitol, mannitol, etc).

Take control - A type of plant based margarine that helps lower blood cholesterol level.

Tofu - A protein substitute made with soy beans. Many vegetarian protein alternatives such as Vegetarian burger patties are made with tofu.

Triglycerides - Fats normally present in the blood that are made from food. Gaining too much weight or consuming too much fat. Alcohol, or carbohydrates may increase the blood triglycerides.

Vitamins - Substances found in food, needed in small amounts to assist in body processes and functions. These include vitamins A, D, E, the B-complex, C, and K.

Common Ingredients used in Indian Cuisine

All-purpose flour – Maida

Aniseed – Ajowain or Carum

Asafoetida – Hing

Aubergine – Begun or baingan (egg plant)

Basmati rice – a kind of aromatic rice

Bay leaf – Tej patta

Beets – Chukandar

Besan flour – chikpea flour

Bitter gourd – Karela

Black pepper – Kali mirchi

Bottle gourd - Lauki

Broad beans – Papdi

Cardamom – Elaich

Cauliflower - gobi

Chapati (wheat) flour – Atta

Chilies – Mirchi

Cinnamon – Dalchini

Cloves – Lavang

Cluster beans - Papdi

Coconut – Nariyal

Coriander seeds – Dhaniya

Cumin – Jeera

Curry leaves – Kari patta
Dahi - Yogurt
Dill – suva bhaji
Drumsticks – Surgavo
Eggplant - Brinjal
Fennel – Saunf
Fenugreek – Methi seeds
Fenugreek leaves – Methi leaves
Fresh coriander - Cilantro
Garam Masala – Indian spice blend
Garlic – Lasoon
Ghee – Clarified butter
Ginger – Adrak
Gram flour – Besan or chick peas flour
Jaggery – Gur
Kankoda - Golkandra
Mace – Javitri
Malai - Cream
Mango powder – Amchoor
Mint – Hara pudeena
Mustard – Sarasoon or Rai
Nut meg – Jaiphal
Onion seeds – Kalonji
Oregano seeds – Ajwain
Paanch phhotan/phhotan – mixture of mustard seeds, coriander seeds, methi seeds etc
Palak – Spinach
Paneer – Indian cheese
Parsley – Ajmood ka patta
Pink beans - Valore
Pomogranate seeds – Anardana
Poppy seeds – Khus Khus
Raisin – Kismish
Red lentils – Masoor Dhal
Ridge gourd – Torai or Turia
Saffron – Kesar
Sambal oelek – Chilli paste
Sesame seeds – Til
Tamarind – Imli
Toor Dhal – Yellow split peas
Turmeric – haldi
Urad Dhal – Split black gram
Vinegar – Sirka
Yellow split peas – Channa dhal
Yogurt – Dhahi

Prepared Indian Dishes

APPETIZERS

Chiura – a snack mix made with variety of ingredients such as flattened rice, deep fried flour dough bits etc.,
Lassi – A yogurt based drink.
Mulligatawny – soup made with lentils etc.,
Nimbu paani – a drink similar to lemonade.
Pakoras – Batter fried vegetables
Papad – Baked or fried item that looks like a Large patato chip made with legumes and or rice flour with spices.
Puris – Deep fried flat bread made with wheat flour.
Samosa – Deep fried pastry stuffed with potatoes & other vegetables or meat.

BREADS

Bathura – fried dough made with all purpose flour.
Chapathy – Flat bread made with wheat flour.
Dhokla – a steamed bread made with chick peas flour.
Handva – Rice and mung dhal based bread.
Kachori – Deep fried stuffed dough.
Muthias – a steamed dish made with flour and vegetable.
Nan – Baked (traditionally in clay oven called Tandoor) bread.
Paratha – a kind of bread made with flour.
Roti – a kind of flat bread.
Thepla – a flat bread made with wheat flour, gram flour and spices.

ENTREES

Biriyani – Rice dish made with vegetables; chicken, meat or shrimp.
Chicken curry – Chicken in spicy sauce.
Chole – A dish made with chick peas, onions, tomatoes and spices.
Kadhi – a savory dish made with yogurt, bay leaves, spices and vegetables.
Maccher Jhol – Fish curry.
Malai Kofta - Cheese and vegetable balls in special sauce.
Pullao – Rice dish made with spices & or with vegetables; meat
Tandoori Chicken – Marinated chicken baked in clay oven.
Tandoori Fish – Marinated fish baked in clay oven.

VEGETABLE DISHES

Batata nu shak – a dish made with potato and spices.
Dalma – Dhals cooked with vegetables.
Dhal – Are cooked legumes. Most common dhals are toor, mung etc.,
Palak paneer – dish made with spinach, cheese and spices.
Saag – made with mixed greens such as spinach, mustard greens etc.,
Shukto – a vegetable stew.
Toor dhal, split mung beans are commonly used in dhal preparation.
Undhiyu – delicious vegetable concoction made with Potato, Egg plant, green beans amongst several other vegetables.
Vegetable curry – Made with dhal, vegetables, spices & small amount of oil.

DESSERTS

Adirasam – deep fried sweet dish made with rice flour.
Appam – rice/wheat based preparation.

Barfies – look like bar cookies made with ghee, milk, nuts etc.,
Gulab Jamoon – a sweet dish soaked in rose flavored sugar syrup.
Halwa – a sweet made with milk, sugar, ghee etc.,
Jilebi – fried dish made with chick pea flour and dipped in sugar syrup.
Kheers – a dessert made by reducing milk and with other ingredients such as vermicelli, rice, almonds etc.,
Kulfi – a milk based frozen dessert similar to Ice cream.
Laddu – ball shaped sweet made with chick pea flour, sugar etc.,
Mahi - a milk based dessert.
Mistidoi - a milk based dessert.
Mohanthal – dessert made with gram flour, milk and cheese.
Payasam – a sweet dish made with milk, sugar, rice or dhal.
Peda – A sweet made with milk, ghee and sugar.
Rasagulla – a milk based dessert in sugar syrup.
Rasamalai – a milk based dessert.
Sandesh – a milk based dessert.
Shrikhand – a milk based dessert.
Sweet Pongal - sweet tasting cooked rice.

MISCELLANEOUS

Chai – Tea made with milk.
Chutneys – are pureed condiments made with coconut, mango, cilantro, mint, Tamarind and spices.
many varieties of pickles.
Pickles – are condiments that accompany Indian cuisine. Lemon and Mango pickles are common among
Raita – a meal accompaniment made with yogurt; grated cucumber, green chilies, onions etc.,

TABLE OF WTS AND MEASURES

1 ounce = 30 grams (actual weight 28.35g)
1 fluid ounce = 30 milliliters (actual amount 28.35ml)
1 cup = ½ pint = 240ml = 8 fl ounces
2 cups = 1 pint = 480 ml = 16 fl ounces
1 pint = 1 quart = 960 = 32 fl ounces
4 quarts = 1 gallon
1 teaspoon fluid = 5 ml or 1/6 oz
1 table spoon fluid = 15 ml or ½ oz
1cup (8 oz) = 16 table spoons
1 kilogram = 2.2045 pounds (2.2lb)
1 liter – 1.0567 quarts
1 pound = 453.6 grams
To change pounds to kilograms, multiply by 0.45

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Important website Addresses

<http://ndep.nih.gov/get-info/Heartcare.htm>

<http://ndep.nih.gov/materials/pubs/ABC/English.pdf>

<http://ndep.nih.gov/materials/pubs/ABC/hindi.pdf>

<http://ndep.nih.gov/materials/pubs/ABC/gujarati.pdf>

<http://ndep.nih.gov/materials/pubs/ABC/englishfacts.pdf>

<http://ndep.nih.gov/materials/pubs/ABC/gujaratifacts.pdf>

<http://ndep.nih.gov/materials/pubs/ABC/hindifacts.pdf>

<http://ndep.nih.gov/materials/pubs/ABC/hindifacts.pdf>

<http://ndep.nih.gov/materials/pubs/ABC/gujaratipr.pdf>

<http://ndep.nih.gov/materials/pubs/ABC/hindipr.pdf>

<http://ndep.nih.gov/materials/psas/Asian-print/Hindi/HindiPatient.pdf>

<http://ndep.nih.gov/materials/psas/Asian-print/Hindi/HindiDr.pdf>

<http://ndep.nih.gov/materials/psas/Asian-print/Gujerati/GujPatient.pdf>

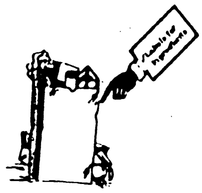
<http://ndep.nih.gov/materials/psas/Asian-print/Gujerati/GujDr.pdf>

<http://ndep.nih.gov/materials/mediakits/indian/sample-buffet.pdf>

What Can I Eat To Manage My Diabetes?

Information & Guidelines on the Asian-Indian Cuisine

[To be used with a guidance of your physician and dietitian]

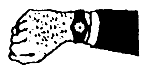




- Diabetes is a condition where your body is not able to make enough insulin or the insulin is not being used properly. Insulin enables your body to get energy from glucose – the sugar broken down from the foods you eat. A poor balance between insulin and blood glucose levels can result in high glucose (hyper-glycemia) or low blood glucose (hypoglycemia) levels in your blood.
- Maintaining blood glucose levels around acceptable levels is important and research has shown that it can help prevent complications in your eyes, kidneys, blood vessels and more.
- Under your physician's guidance, diabetes and blood glucose levels are managed with Medical Nutrition Therapy, an individualized meal plan (see page 4), exercise and medications as needed.
- The foods you eat, total calories, activity and body weight are some of the factors that can affect blood levels. Foods that contain carbohydrates can raise blood glucose levels. Fats and protein can also affect weight, if eaten in excess.
- Keep a daily log of your meals and blood glucose levels to better understand fluctuations.
- Include a daily exercise plan into your regimen (after talking to your physician).
- Become familiar with food labels and ingredients. Your Dietitian can help you with this.

Methods of preparing and cooking

- Sprouting legumes increases nutritional value. It can be fun sprouting different legumes!
- Steam vegetables with little water Do not drain the cooking water from rice or vegetables
- Limit or avoid highly processed foods or high-fat, salty "fast" foods
- Try to eat small, frequent meals at regular times



Drink plenty of water/liquids



- 6-8 glasses is the usually recommended amount. Plain water is the best. Avoid excessive use of caffeinated drinks like coffee, tea and caffeine containing drinks.
- Use alcohol only after talking to your physician

Some other factors that can affect Health

- Include at least 20 gms. of fiber everyday. Whole grains, beans & vegetables are rich sources
- Many 'fast' foods are high in fat, salt and/or sugar. Limit or avoid frequent use of such foods
- If you have high blood pressure, restrict the use of salt, salty foods like regular chips and pickles
- Talk to your physician about your multi-vitamin and multi-mineral supplements.
- Have a routine check-up blood lipid levels.

DIABETES CAN BE MANAGED!   TAKE CONTROL!   YOU CAN DO IT!!

What Can I Eat To Manage My Diabetes?

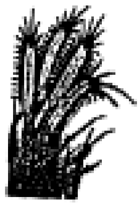
Name: **Today's Date:**

Calories/Day: **Present Weight:**

Foods from different sources can be combined to make up a balanced meal. Your personal meal plan should be designed to suit your lifestyle. Your meal plan will suggest servings of each food group at every meal. The different food groups and examples of one serving in each food group are as follows: (Please note that values are approximate)

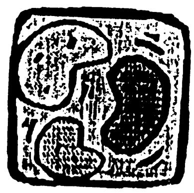
1. GRAINS/BEANS/STARCHY VEGETABLES (without added fats or oils):

[1 serving supplies about 15 gms CHO, 3 gms protein and 80 calories]



Bread: 1 slice
Sookhi Chappathi: 1-6" wide
Rice: ⅓ cup
Wheat, Corn, Oats, Potato: ½ c. (ckd)
Popcorn: 3 cups
Green Plaintain/Peas: ½ cup
Avial: ½ cup
Poha: ½ cup
Sambar: ½ cup
Beans/Legumes: ½ cup (120 cal.)
Cooked noodles/sooji: ½ cup
Idli: 1 Naan: ¼ 8"x2"
Rice flour: 2 Tbsp.
Wheat flour: 2 ½ Tbsp

2. MEAT & MEAT ALTERNATIVES — VERY LEAN



[1 serving supplies 7 gms protein, 0-1 gms fat and 35 calories]

Chicken, turkey (skinless white meat): 1 oz
Tuna in water, flounder: 1 oz
Low-fat cheese: 1 oz
Egg whites only: 2
Dhal*: ½ cup (cooked)
Shrimp (Prawns): 1 oz
Low-fat Tofu: 3 oz
*(also supplies 15 gms CHO and 120 calories approximately)

MEAT & MEAT ALTERNATIVES — LEAN

[1 serving supplies 7 gms protein, 3 gms fat and 55 calories]



Chicken, turkey (skinless dark meat): 1 oz
Tuna in oil: 1 oz
Lean lamb, pork, beef: 1 oz
Regular cottage cheese: 1/4 cup Cheeses with 3 gms fat or less: 1 oz

MEAT & MEAT ALTERNATIVES — MEDIUM FAT

[1 serving supplies 7 gms protein, 5 gms fat and 75 calories]



Egg : 1
Fried fish product : 1 oz
Ricotta cheese : ¼ cup
Lamb (rib roast, ground): 1 oz
Tofu: 4 oz Tempeh: ¼ cup
Soy milk: 1 cup

MEAT & MEAT ALTERANTIVES —HIGH FAT



[1 serving supplies 7 gms protein, 8 gms fat and 100 calories]

Regular cheese: 1 oz
Chicken/turkey hot dog: 1 (10/lb)
Peanut butter: 1 oz (+ 1 fat exchange)
Sausage: 1 oz
1% Paneer: 1 oz

3. VEGETABLES (no fat added)



[1 serving supplies 5 gms CHO and 2 gms protein and 25 calories]

Greens: Fenugreek leaves ½ cup. Green beans: ½ cup
Cabbage Cauliflower: ½ cup
Gourds: ½ cup
Brinjal: ½ cup Tomato: ½ cup
Ccapsicum: ½ cup
White radish, chow-chow, 1/2 cup, drumstick, okra: ½ cup
Salad - 1 cup

4. FRUITS (Serving size varies)



[1 serving supplies 15 gms CHO 60 calories]

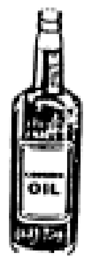
Banana: ½ cup
Apple, Orange: 1 (small)
Large Pear ½
Melons: 1 cup
Mango: ½ cup
Fresh guava: ½ cup
Canned fruit: ½ small

5. MILK AND MILK PRODUCTS



[1 serving supplies 12 gms GHO, 8 gms protein; 1–5 gms fat; 90-150 calories]
Whole/skimmed/low fat milk: 1 cup
Buttermilk and curds (tones or whole): 1 cup
1% Paneer: 1 oz

6. FATS and OILS



[1 serving supplies 5 gms of fat and 45 calories]
Cooking oil: 1 Tsp. Cocunut, grated: 2 Tbsp.
Nuts or seeds: 1 Tbsp. Margarine: 1 Tsp.

*Try to use unsaturated oils like olive oil instead of saturated fats like butter. and ghee. Avoid frequent use of fried foods

*Keep oils, salt and sugar use to a minimum

Adapted from Exchange List for Meal Planning (1995) and the Ethnic Series on the Indian-Pakistani Cuisine by American Diet Association and American Diabetes Association (1996); Modern Nutrition in Health & Disease, XIII[th] Ed. Ed. By Shils, M.Olson, J.A. & Shike, M. Lea & Febiger Co.(1994)

A sample format for an Individualized Meal Plan as per Your Physician and Dietitian

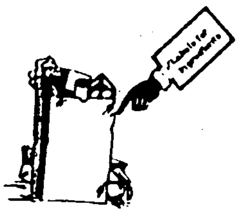
Yoga/Exercise: Time:
Other regulated routines: Time:

Meal/Food Group	Servings	CHO* (gms)	Protein (gms)	Fat (gms)	Calories
Breakfast					
Mid-morning					
Lunch					
Mid-Afternoon					
Dinner					
Night Snack					
Total					

*CHO = Carbohydrate; gms = Grams; oz.= ounce; tsp = teaspoon; Tbsp = Tablespoon; 28-30gms = 1 oz., 8 oz = 1 cup; 3 tsp = 1Tbsp; 2 Tbsp = 1 0z; ckd = cooked.

मुझे अपनो डायबीटिस को नियंत्रित करने के लिये क्या खाना चाहिए?
एशियन एवं भारतीय भोजन के बारे में सूचनाएँ एवं निर्देश

(अपने डाक्टर या भोजन कर्ता परामर्श की सलाह से लें)





- डायबीटिस शरीर की वह अवस्था है, जब शरीर अपनी जरूरत के अनुसार इन्सुलिन तैयार न कर *पाना* हो! खाये हुए भोजन से शुगर (शरकरा) को निकाल, ग्लूकोज़ से शरीर को ताकत प्रदान करने के लिए इन्सुलिन की आवश्यकता होती है। इन्सुलिन और रक्त में ग्लुकोज़ का अगर ठीक सन्तुलन न हो तो, हाइपरग्लाईसीमिया (ज्यादा शुगर) या हाइपोग्लाई सीमिया (कम *ब्लड् ग्लूकोस*) हो जाती है।
- खोज से यह साबित हो चुका है कि आँखों, गुर्दो, रक्तवाहिनियों में होने वाली तकलीफों (बीमारियों) से बचने के लिए रक्त में शुगर (शरकरा) की नियंत्रित मात्रा का होना आवश्यक है।
- डाक्टर के परामर्श से, डायबीटिस तथा ब्लड ग्लुकोज़ लेवल को, निर्धारित भोजन *व्यक्ति आधाप्ति देखें चित्र* भोजन व्यायाम तथा दवाइयाँ देकर नियंत्रित किया जा सकता है।
- भोजन में भिन्नता, केलरीज़ की मात्रा दिनचर्या तथा शरीर का वज़न, आपके शरीर में ग्लुकोज़ लेवल को प्रभावित करते हैं। कार्बोहाइड्रेट युक्त भोजन ब्लड ग्लुकोज़ को बढ़ाते हैं। *चर्बी* तथा प्रोटीन का अधिक सेवन भी शरीर के वज़न को बढ़ाता है।
- डायबीटिस के उतार चढ़ाव को समझने के लिए प्रतिदिन खाया हुआ भोजन तथा ग्लुकोज़ लेवल को नोट करना चाहिए।
- अपने डाक्टर के परामर्श से अपनी दिनचर्या में व्यायाम को अपनी दिनचर्या का हिस्सा बनाना चाहिए।
- अपने भोजन परामर्शकर्ता की सलाह से विभिन्न प्रकार के भोजन तत्वों की जानकारी बढ़ानी चाहिए।

भोजन को तैयार करने और पकाने के ढंग

- द्रव्यों को अंकुरित करने से उनकी पौष्टिकता बढ़ जाती है। तरह-तरह की दालों को अंकुरित रूप में देख कर मन आनन्दित होता है!
- सब्जियों को कम पानी में *चर्बीय* पकाना चाहिए। चावल तथा सब्जियों को पकाते समय उनका पानी नहीं फेकना चाहिए।



- अधिक वसायुक्त, नमकीन, फास्ट फुड, तथा ज्यादा प्रोसेस्ट भोजन का कम से कम उपयोग करना चाहिए।
- निर्धारित समय पर थोड़ा-थोड़ा करके कई बार खाना चाहिए।



अधिक मात्रा में पेय पदार्थ और शुद्ध जल पियें

- दिन में कम से कम छः से आठ गिलास पेय जल/पानी पीना चाहिए। सादा पानी सबसे अच्छा रहता है। चाय, कॉफी तथा केफीनयुक्त तरल पदार्थों का कम से कम उपयोग करना चाहिए।
- अपने डाक्टर के परामर्श के बिना शराब का सेवन न करें।

स्वास्थ्य सम्बन्धित अन्य जानकारियाँ

- दिन में 50 ग्राम रेशेदार भोजन खाना चाहिए। छिलके सहित अन्न, बीन्स, तथा सब्जियों में अधिक रेशा होता है।
- बाज़ार में प्रचलित फास्ट फुड खाने में वसा, नमक तथा चीनी की अधिकता होती है। इसलिए इनका कम से कम उपयोग करना चाहिए।
- अधिक रक्तचाप की बिमारी में नमक और नमकीन खाना जैसे कि चिप्स और आचार का कम उपयोग करना चाहिए।
- अपने डाक्टर से पूछ कर ही मल्टीविटमिन्स और मल्टी मिनरल *अनुपूरको* का इस्तेमाल करना चाहिए। किसी *आपके खून के चर्बी स्तर नेमी जांच कर लेना*

डायबीटिस को नियंत्रित किया जा सकता है। नियंत्रण करें, आपके बस की बात हैं।

डायबीटिस को नियंत्रित करने के लिये क्या खाना चाहिए?

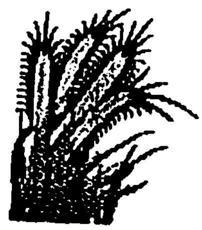
नाम:
कैलोरी/दिन:

दिनांक :					
वजन :					

संतुलित आहार बनाने के लिए भोजन में विशिष्ट तत्वों का समायोजन होना चाहिए। आपका व्यक्तिगत खान-पान आपके रहन-सहन के ढंग के अनुसार होना चाहिए। भोजन योजना को निम्नलिखित भागों में विभाजित किया जा सकता है। निम्नलिखित उदाहरणों के द्वारा *हम समझ सक्ते है* है कि विभिन्न तरह के भोजन समूहों में से कौन सा भोजन किस समय करना चाहिए। (ध्यान रहे कि ये मात्रायें लगभग हैं)

1. दालें/फलियाँ/स्टार्चयुक्त सब्जियाँ (चर्बी और तेल रहित)

(1 भोजन का एक भाग लगभग 15 ग्राम कार्बोहाइड्रेट 3 ग्राम प्रोटीन एवं 80 केलरीज़)



डबल रोटी 1 टुकड़ा
चावल 1/3 कप
भुने हुए मकई के दाने 3 कप
ऐविल : 1/2 कप
साम्बर : 1/2 कप
तैयार सेमियां न्यूडलेस/सूजी : 1/2 कप
चावल का आटा : 2 बड़ा चम्मच

सूखी चपाती 1-6" चौड़ी)
गेहूँ, ओट्स, आलू 1/2 कप
कच्चा केला/मटर : आधा कप
पोहा 1/2 कप
खेम/फली 1/2 कप (120 कैलरीज़)
इटली : 1 नान : 1/4 8"×2"
गेहूँ का आटा : 2½ बड़ी चम्मच

2. मांस एवं मांस का ऑल्टरनेटिव (अति कम चर्बी युक्त)

(1 हिस्सा सात ग्राम प्रोटीन, 0-1 ग्राम चर्बी तथा 35 केलरीज़ देता है!)



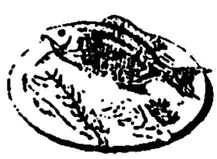
मुर्गी टर्की (त्वचारहित सफेद मांस):1 औंस
टूना एवं फ्लाइन्डर मच्छी पानी में 1 औंस
दो अण्डों का सफेद हिस्सा
शिरम्प (प्रोन्स) : 1 औंस
कमचर्बी वाला टोफू 3 औंस

कम वसा वाला पनीर : 1 औंस
दाल : 1/2 कप पकी हुई
(यह दाल लगभग 15 ग्राम कार्बोहाइड्रेट्स तथा 120 केलरीज़ देती है)

मांस एवं मांस का ऑल्टरनेटिव (कम चर्बी युक्त)

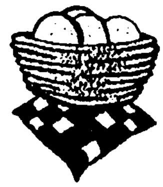
(1 हिस्सा सात ग्राम प्रोटीन, 3 ग्राम वसा तथा 55 केलरीज़ देता है!)

मुर्गी टर्की (त्वचारहित डार्क टांग मांस): 1 औंस
टूना मच्छी तेल में : 1 औंस
कोटेज़ चीस 1/4 कप पनीर
जिसमें तीन ग्राम तक वसा हो : 1 औंस



मांस एवं मांस का ऑल्टरनेटिव (मध्यम चर्बी युक्त)

(1 हिस्सा सात ग्राम प्रोटीन, 5 ग्राम वसा तथा 75 केलरीज़ देता है!)



1 अंडा : 1
टोफू : 4 औंस टेम्फ 1/4 कप
तली हुई मच्छी 1 औंस भेड़ का मांस (भुनी हुई रिब्ब कीमी) 1 औंस

रिकोटा चीज : 1/4 कप
सोयाबीन का दूध : 1 कप

मांस एवं मांस का *ऑ*ल्ट्रानेटिव (अधिक चर्बी युक्त)



(1 हिस्सा सात ग्राम प्रोटीन, 8 ग्राम वसा तथा 100 केलरीज़ देता है!)

रेगुलर पनीर : 1 औंस मुर्गी / टर्की, हॉट ड़ाग ः 1(10/पाउंड़)

मूँगफली का मक्खन 1 औंस (+1 वसा का हिस्सा)

सासेज : 1 औंस 1% पनीर : 1 औंस

3. सब्जियाँ बिना वसा के



(1 हिस्सा 5 ग्राम कार्बोहाइड्रेट, 2 ग्राम प्रोटीन तथा 25 केलरी देता है)

हरीमेथी की पत्तियाँ 1/2 कप हरी फलिया 1/2 कप

बन्द गोभी एवं फूल गोभी 1/2 कप

कद्दू 1/2 कप बैंगल 1/2 कप

टमाटर 1/2 कप शिमला मिर्च 1/2 कप

सफेद मूली, मूँगा, भिंडी 1/2 कप



4. फल (खानेके लिए तथ हिस्से तब्दील होते रहते हैं)

(1 हिस्सा 15 ग्राम कार्बोहाइड्रेट तथा 60 केलरी देता है)

केला : 1/2 कप सेब, संतरा : 1 (छोटा)

बड़ी नाशपती 1/2 कप तरबूजा तथा खरबूजा 1 कप

छोटा आम : 1/2 ताजा अमरूद 1/2 कप

5. दूध एवं दूध मिला उत्पाद



(1 हिस्सा 12 ग्राम कार्बोहाइड्रेट 8 ग्राम प्रोटीन, 1 से 5 ग्राम वसा तथा 90-150 केलरी देता है)

लस्सी या दही : 1 कप

1-10 पनीर : 1 औंस

6. वसा एवं तेलयुक्त



(1 हिस्सा 5 ग्राम वसा तथा 45 केलरी देता है)

तेल 1 चम्मच (चायवाली) सूखे सेम का बीज 2 बड़ी चम्मच

मक्खन या *मार्गरिन* : 1 चम्मच (चायवाली)

• मक्खन या घी की बजाय जैसे की जैतून का तेल का उपयोग करना चाहिए। तले भोजन का अधिक उपयोग नहीं करना चाहिए।

• तेल, नमक तथा चीनी का उपयोग कम से कम करना चाहिए।

एक्सचेंज लिस्ट फार मील प्लानिंग (1995) और अेथनीक सीरीज़ ओन द इन्डीयन पाकिस्तानी *कूसिन* अमेरीकन डाईट अशोशीएशन एंड अमेरीकन डायाबेटीस अशोशीएसन (1996)

मोडर्न ब्यूटिश स्वास्थ्य वि बीमारी में तेरहवाँ संस्वारण सलाद शील्स, हम ओलज जे और शाइप हम लिये वे फेबिर कम्पेनी (1994)

मुझे अपनो डायबीटिस को नियंत्रित करने के लिये क्या खाना चाहिए?

एशियन एवं भारतीय भोजन के बारे में सूचनाएँ एवं निर्देश

(अपने डाक्टर या भोजन कर्ता परामर्श की सलाह से लें)

आपके डाक्टर एवं सहविशेषज्ञों के अनुसार स्वनियोजित आहार का नमूना

योगा/अभ्यास : समयः

अन्य *नेमी काम* : समयः

भोजन/खाद्य समूह	भोजन का भाग	कार्बोहाइड्रेट(ग्राम)	प्रोटीन (ग्राम)	चरबी (ग्राम)	केलोरी
कलेवा					
मध्य सुबह					
मध्याह्न भोजन					
मध्याह्न					
रात का भोजन					
रात का *अल्पाहार*					
कुल					

28-30 ग्राम = 1 औंश; 8 औंश = 1 कप, 3 चमचियाँ = 1 चम्मच; 2 चम्मच = 1 औंश

Padmini Balagopal, MsS. B.Ed., RD.CDE

Hindi Translation done by
Vanita Manchanda, MS.RD.

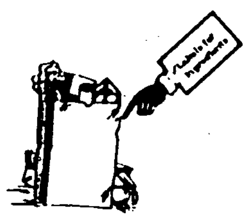
English version Reviewed by

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ನನ– ಮಧುಮೇಹ (ಡಯಾಬೀಟಿಸ್) ಖಾಯಲೆಯನು– ಹತೋಟಿಯಲ್ಲಿಡಲು ನಾನೇನು ತಿನ–ಬೇಕು?

ಭಾರತೀಯ ಆಹಾರ ನಿಯಮಕ್ಕೆ ಅನುಸಾರವಾದ ಸಲಹಾ ಸೂಚನೆಗಳು

(ನಿಮ್ಮ ವೈದ್ಯರ ಮತ್ತು ಆಹಾರ ತಜ್ಞರ ಸಲಹೆಯ ಜೊತಗೆ ಇದನು– ಬಳಸಿ)





- ನಿಮ್ಮ ದೇಹವು ನಿಮಗೆ ಬೇಕಷ್ಟು ಇನ್ಸುಲಿನ್ ತಯಾರಿಸಲು ಅಶಕ್ತವಾದಾಗ ಅಥವಾ ತಯಾರಾದ ಇನ್ಸುಲಿನ್‌ನನು– ಉಪಯೋಗಿಸಲು ಅದಕ್ಕೆ ಸಾಧ್ಯವಾಗದಾಗ ಮಧುಮೇಹ ಖಾಯಲೆ ಬರುತ್ತದೆ. ಇನ್ಸುಲಿನ್ ನಿಮ್ಮ ಆಹಾರದಲ್ಲಿರುವ ಸಕ್ಕರೆಯಿಂದ ಉತ್ಪತ್ತಿಯಾದ ಗ್ಲೂಕೋಸನು– ಶಕ್ತಿಯಾಗಿ ಸಹಾಯ ಮಾಡುತ್ತದೆ. ರಕ್ತದಲ್ಲಿರುವ ಗ್ಲೂಕೋಸ್ ಮತ್ತು ಇನ್ಸುಲಿನ್ ನಡುವೆ ಅಸಮತೆ ಬಂದಾಗ ಗ್ಲೂಕೋಸ್ ಪ್ರಮಾಣ ಹೆಚ್ಚಾದರೆ ಹೈಪರ್ ಗ್ಲೈಸೇಮಿಯಾ ಎಂತಲೂ ಮತ್ತದ ಪ್ರಮಾಣ ಕಡಿಮೆಯಾದರೆ ಹೈಪೋಗ್ಲೈಸೇಮಿಯಾ ಎಂತಲೂ ಕರೆಯುತ್ತಾರೆ.
- ರಕ್ತದ ಗ್ಲೂಕೋಸಿನ ಪ್ರಮಾಣವನು– ಮಿತಿವಾಗಿಡುವುದು ಅತ್ಯಾವಶ್ಯಕ. ಇದು ನಿಮ್ಮ ಕಣ್ಣು, ಮೂತ್ರಕೋಶ (ಕಿಡಿ–), ರಕ್ತನಾಳ ಮತ್ತಿತರ ಅಂಗಾಂಗಳಲ್ಲಿ ಸಮಸ್ಯಗಳು ಬಾರದಂತೆ ಕಾಪಾಡಲು ಸುಲಭವೆಂದು ವೈದ್ಯಕೀಯ ಸಂಶೋಧನೆ ತೋರಿಸಿಕೊಟ್ಟಿದೆ.
- ನಿಮ್ಮ ವೈದ್ಯರ ಮಾರ್ಗದರ್ಶನದಲ್ಲಿ ನಿಮಗಾಗಿಯೇ ಮೆಡಿಕಲ್ ನ್ಯೂಟ್ರಿಷಯನ್ ತಯಾರಿಸಿದ ಒಬ್ಬ ವ್ಯಕ್ತಿಯ ಊಟ, ಉಪಹಾರಗಳ ಪಟ್ಟಿ (ನಾಲ್ಕನೆಯ ಪುಟ ನೋಡಿ), ವ್ಯಾಯಾಮ, ಮತ್ತು ಔಷಧಿಗಳಿಂದ ಡಯಾಬೇಟಿಸ್ ಮತ್ತು ರಕ್ತದ ಗ್ಲೂಕೋಸಿನ ಮಟ್ಟವನು– ನಿಯಂತ್ರಿಸಲು ಸಾಧ್ಯವಿದೆ.
- ನಿಮ್ಮ ಆಹಾರ, ಅದರಲ್ಲಿರುವ ಕ್ಯಾಲರಿಗಳು, ದೈಹಿಕಶ್ರಮ ಮತ್ತು ತೂಕಗಳು ನಿಮ್ಮ ರಕ್ತದ ಗ್ಲೂಕೋಸ್ ಮಟ್ಟದ ಮೇಲೇ ಪರಿಣಾಮ ಬೀರುತ್ತವೆ. ಶರ್ಕರ ಪಿಷ್ಠ ತುಂಬಿರುವ ಆಹಾರಗಳು ಗ್ಲೂಕೋಸ್ ಮಟ್ಟವನು– ನಿಯಂತ್ರಿಸಬಹುದು. ಕೊಬ್ಬಿನ ಮತ್ತು ಪ್ರೋಟೀನ್ ಇರುವ ಪದಾರ್ಥಗಳನು– ಹೆಚ್ಚಿಗೆ ಸೇವಿಸಿದರೆ ದೇಹದ ತೂಕದ ಮೇಲೆ ಪರಿಣಾಮ ಬೀರುವದು.
- ನಿಮ್ಮ ಆಹಾರ ಮತ್ತು ರಕ್ತದ ಗ್ಲೂಕೋಸ್ ಪ್ರಮಾಣದಲ್ಲಿ ಆಗುವ ವಿರಿಳಿತಗಳನು– ಗಮನಿಸಲು, ಆದರ ವಿವರಗಳನು– ನಿಮ್ಮ ಆಹಾರದ ದಿನಚರಿಯ ಪುಸ್ತಕದಲ್ಲಿ ಬರೆದಿಡುವುದು ಅವಶ್ಯ.
- ದೈನಿಕ ವ್ಯಾಯಾಮದ (ನಿಮ್ಮ ವೈದ್ಯರ ಸಲಹೆಯ ಮೇರೆಗೆ) ನಿಮ್ಮ ಜೀವನದಲ್ಲಿ ಅಳವಡಿಸಿಕೊಳ್ಳಿ.
- ನಿಮ್ಮ ತಿಂಡಿತಿನಿಸುಗಳ ಜೊತೆ ಇರುವ ಗುರುತು ಚೀಟಿ (ಲೇಬಲ್) ಗಳ, ಮತ್ತದರಲ್ಲಿರುವ ಆಹಾರದ ಘಟಕಗಳ ಪರಿಚಯ ಮಾಡಿಕೊಳ್ಳಿ. ನಿಮ್ಮ ಪರಿಚಯದ ಆಹಾರ ತಜ್ಞರಲ್ಲಿ (ಡಯಟೀಷಿಯನ್) ಈ ವಿಷಯದಲ್ಲಿ ಸಹಾಯಕೇಳಿ.

ಅಡುಗೆಯ ತಯಾರಿ ಮತ್ತು ವಿಧಾನ





- ಮಾಳಕೆಬರಿಸಿದ ಧಾನ್ಯ ಚೇಷ್ಠಿತ ಆಹಾರ ಧಾನ್ಯಗಳನು– ಮಾಳರೆ ಬರಿಸುವದು ಯಜವಾಗಿರುತ್ತದೆ
- ತರಕಾರಿಗಳನು– ಕಡಿಮೆ ನೀರು ಬಳಸಿ ಉಗಿಯಲ್ಲಿ ಬೇಯಸಿ. ತರಕಾರಿ ಮತ್ತು ಅಕ್ಕಿ ಬೇಯಿಸಿದ ನೀರನು– ಚೆಲ್ಲಬೇಡಿ.
- ತಕ್ಷಣ ತಿನ–ಲು ತಯಾರಾದ ಮತ್ತು ತುಂಬ ಕೊಬ್ಬು, ಉಪ್ಪು ಇರುವ ಫಾಸ್ಟ್ ಫುಡ್ ಆಹಾರದ ಬಳಕೆ ನಿಲ್ಲಿಸಿ ಅಥವಾ ಕಡಿಮೆ ಮಾಡಿ.
- ಆಹಾರವನು– ಆಗಾಗ, ಚಿಕ್ಕಪ್ರಮಾಣದಲ್ಲಿ ಸೇವಿಸಿ.

ಬಹಳಷ್ಟು ನೀರು/ಪಾನೀಯ ಸೇವಿಸಿರಿ

- ದಿನಕ್ಕೆ 6-8 ಲೋ ಟ ನೀರು ಕುಡಿಯಿರಿ. ಬರೀ ನೀರು ಅತ್ಯುತ್ತಮ ಪಾನೀಯ. ಕಾಫಿ. ಟೀ, ಮತ್ತಿತರ ಕ್ಯಾಫೀನ್ ಇರುವ ಪಾನೀಯಗಳ ಬಳಿಕೆ ಕಡಿಮೆಮಾಡಿ.
- ನಿಮ್ಮ ವೈದ್ಯರ ಒಪ್ಪಿಗೆ ಇದ್ದರೆ ಮಾತ್ರ ಮಾದಕ ಪಾನೀಯ ಮಿತವಾಗಿ ಸೇವಿಸಿ.

ಇನಿ–ತರ ಆರೋಗ್ಯದ ಕುರಿತು ಮಾಹಿತಿ

- ದಿನಕ್ಕೆ 20 ಗ್ರಾಂನಷ್ಟಾದರೂ ನಾರು (ಫೈಬರ್) ಇರುವ ಆಹಾರ ತಿನಿ–, ಇಡೀ ಧಾನ್ಯ, ಬೇಳಕಾಳು, ಮತ್ತು ತರಕಾರಿಗಳಲ್ಲಿ ತುಂಬ ನಾರಿನ ಅಂಶ ಇದೆ.
- ಫಾಸ್ಟ್ ಫುಡ್ ಹೋಟಲುಗಳ ತಿಂಡಿ ತಿನಿಸುಗಳಲ್ಲಿ ತುಂಬ ಕೊಬ್ಬು, ಉಪ್ಪು, ಸಕ್ಕರೆ ಇರುತ್ತವೆ. ಅವುಗಳ ಅತಿಯಾದ ಬಳಕೆಯನು– ಕಡಿಮೆಮಾಡಿ ಅಥವಾ ನಿಲ್ಲಿಸಿ.
- ನಿಮ್ಮ ರಕ್ತದ ಒತ್ತಡ ಜಾಸ್ತಿ ಇದ್ದರೆ, ಉಪ್ಪು ಮತ್ತು ತುಂಬ ಉಪ್ಪಿರುವ ಆಹಾರವನು– ಉದಾಹರಣೆಗೆ ಚಿಪ್ಸ್ ಮತ್ತು ಪುಚ್ಚಿನಕಾಯಿಯನು– ಕಡಿಮೆ ಬಳಸಿ.
- ನಿಮಗೆ ಅವಶ್ಯಕವಾದ ಮಲ್ಟಿ ವಿಟಮಿನ್ ಮತ್ತು ಮಲ್ಟಿ ಗಳ ಕುರಿತು ನಿಮ್ಮ ವೈದ್ಯರ ಬಳಿ ವಿಚಾರಿಸಿ.
- ನಿಮ್ಮ ರಕ್ತದಲ್ಲಿರುವ ಲಿಪಿಡ್ ಮಟ್ಟವನು– ನಿಯಮಿತವಾಗಿ ಪರೀಕ್ಷಮಾಡಿಸಿ.

ಮಧುಮೇಹ ಖಾಯಲೆಯನು– ಹದದಲ್ಲಿಡಬಹುದು! ಕಾರ್ಯಗತರಾಗಿ! ನಿಮ್ಮಿಂದ ಇದು ಸಾಧ್ಯ !!

ನನ– ಮಧುಮೇಹ ಖಾಯಲೆಯನು– ಹತೋಟಿಯಲ್ಲಿಡಲು ನಾನೇನು ಮಾಡಬೇಕು?

ಹೆಸರು៖	ಇಂದಿನ ದಿನಾಂಕ៖					
ಕ್ಯಾಲರೀಸ್ / ದಿನ ៖	ತೂಕ ៖					

ಹಲವು ಮೂಲಗಳಿಂದ ಆಹಾರವನು– ಬೆರಸಿ ಸಮತೂಕದ ಆಹಾರ ತಯಾರಿಸಬಹುದು. ನಿಮ್ಮ ಸ್ವಂತದ ಊಟ ತಿಂಡಿಗಳ ಯೋಜನೆ ನಿಮ್ಮ ಜೀವನಕ್ರಮಕ್ಕೆ ಅನುಗುಣವಾಗಿ ಮಾಡಬೇಕು. ನಿಮ್ಮ ಪ್ರತಿ ಊಟದಲ್ಲಿ ಕಳಗೆ ಕೊಟ್ಟಿರುವ ಎಲ್ಲಾ ಆಹಾರ ಗುಪ್ರು ಸೇರಿರಬೇಕು. ಆ ವಿವಿಧ ಗುಂಪುಗಳ ಹೆಸರುಗಳು ಮತ್ತು ಒಂದು ಊಟಕ್ಕೆ ಸಾಕಾಗುವಷ್ಟು ಆಹಾರ ಪ್ರಮಾಣದ ಉದಾಹರಣೆಗಳು ಕೆಳಗಿವೆ. (ಸೂಚನೆ ៖ ಅಂದಾಜಿನ ಅಳತೆಗಳು).

1. ಧಾನ್ಯ/ಬೇಳಕಾಳು/ಪಿಷ್ಟ ತುಂಬಿದ ತರಕಾರಿಗಳು (ಕೊಬ್ಬು/ ಎಣ್ಣೆ ಇಲ್ಲದ್ದು)

(ಒಂದು ಪಾಲು ៖ 3 ಗ್ರಾಂ ಪ್ರೋಟೀನ್ (protein), 15 ಗ್ರಾಂ ಕಾರ್ಬೋಹೈಡ್ರೇಟ್ (CHO) ಮತ್ತು 80 ಕ್ಯಾಲರಿಗಳನು– (Calories) ಒದಿಗಿಸುತ್ತದೆ

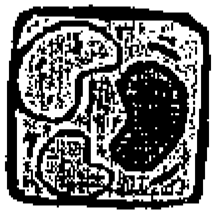
ಬ್ರೆಡ್ ៖ ಒಂದು ತುಂಡು — ಒಣ ಚಪಾತಿ ៖ 1 – 6" ಅಗಲ
ಅನ–៖ 1/3 ಅಳತೆಯ ಬಟ್ಟಲು — ಗೋಧಿ , (ಬೆಂದದ್ದು) ಜೋಳ, ಓಟ್ಸ್, ಆಲೂಗಡ್ಡೆ ៖ 1/2
ಪಾಪ್‌ಕಾರ್ನ್ ៖ 3 ಅಳತೆಯ ಬಟ್ಟಲು — ಬಾಳೆಕಾಯಿ/ಬಟಾಣಿ៖1/2 ಅಳತೆಯ ಬಟ್ಟಲು
ಅವಿಯಲ್ ៖ 1/2 ಅಳತೆಯ ಬಟ್ಟಲು — ಅವಲಕ್ಕಿ ៖ 1/2 ಅಳತೆಯ ಬಟ್ಟಲು
ಸಾಂಬಾರ್ ៖ 1/2 ಅಳತೆಯ ಬಟ್ಟಲು — ಅವರೆಕಾಳು/ ದ್ವಿದಳ ಧಾನ್ಯ ៖ 1/2 ಅಳತೆಯ ಬಟ್ಟಲು (120 ಕ್ಯಾಲರಿಗಳು)
ಶ್ಯಾವಿಗೆ/ರವೆ ៖ 1/2 ಅಳತೆಯ ಬಟ್ಟಲು — ಇಡ್ಲಿ ៖ 1 ನಾನ್ ៖ 8"x2"
ಅಕ್ಕಿಹಿಟ್ಟು ៖ 2 ಟೇಬಲ್ ಚಮಚ — ಗೋಧಿ ಹಿಟ್ಟು ៖ 2 1/2 ಟೇಬಲ್ ಚಮಚ



2. ಮಾಂಸ ಮತ್ತಿತರ ಆಹಾರ ಪದಾರ್ಥಗಳು – ತೀರ ಕಡಿಮೆ ಕೊಬ್ಬಿನದು

(ಒಂದು ಪಾಲು ៖ 7 ಗ್ರಾಂ ಪ್ರೋಟೀನ್,(protein) 0-1 ಗ್ರಾಂ ಕೊಬ್ಬು (fat) ಮತ್ತು 35 ಕ್ಯಾಲರಿಗಳು (calories)

ಕೋಳಿ, ಟರ್ಕಿ (ಚರ್ಮವಿಲ್ಲದ ಬಿಳಿಮಾಂಸ) ៖ 1 ಔನ್ಸ್
ಟ್ಯುನಾ ಮೀನು (ನೀರಿನಲ್ಲಿ), ಚಪ್ಪಟೆ ಮೀನು ៖ 1 ಔನ್ಸ್ — ಕಡಿಮೆ ಕೊಬ್ಬಿನ ಚೀಸ್ ៖ 1 ಔನ್ಸ್
ಮೊಟ್ಟೆಯ ಬಿಳಿಯ ಭಾಗ ಮಾತ್ರ ៖ 2 — ತೊಗರಿ ಬೇಳೆ *៖ 1/2 ಅಳತೆಯ ಬಟ್ಟಲು
ಸಿಗಡಿ ៖ 1 ಔನ್ಸ್ — * (ಅಂದಾಜು 15 ಗ್ರಾಂ ಕಾರ್ಬೋಹೈಡ್ರೇಟ್, 120 ಕ್ಯಾಲರಿ ಒದಗಿಸುತ್ತದೆ)
ಟೋಫು (ಸೋಯ ಚೀಸ್៖ಕಡಿಮೆ ಕೊಬ್ಬಿನದು) ៖ 3 ಔನ್ಸ್



ಕಡಿಮೆ ಕೊಬ್ಬಿನದು

(ಒಂದು ಪಾಲು ៖ 7 ಗ್ರಾಂ ಪ್ರೋಟೀನ್(protein), 3 ಗ್ರಾಂ ಕೊಬ್ಬು (fat) ಮತ್ತು 55 ಕ್ಯಾಲರಿಗಳು (calories))

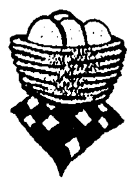
ಕೋಳಿ, ಟರ್ಕಿ (ಚರ್ಮವಿಲ್ಲದ ಕಪ್ಪು ಛಾಯೆಯ ಮಾಂಸ) ៖ 1 ಔನ್ಸ್
ಟ್ಯುನಾ ಮೀನು (ಎಣ್ಣೆಯಲ್ಲಿ)៖1 ಔನ್ಸ್ — ಕುರಿ, ಹಂದಿ, ದನದ ಮಾಂಸ៖1 ಔನ್ಸ್
ಕಾಟೇಜ್ ಚೀಸ್ (ಸಾದಾ) ៖ 1ಔನ್ಸ್
3 ಗ್ರಾಂ ಅಥವಾ ಕಡಿಮೆ ಕೊಬ್ಬು ಇರುವ ಚೀಸ್ : 1 ಔನ್ಸ್



ಸಾಧಾರಣ ಕೊಬ್ಬಿನದು

(ಒಂದು ಪಾಲು ៖ 7 ಗ್ರಾಂ ಪ್ರೋಟೀನ್ (protein),5 ಗ್ರಾಂ ಕೊಬ್ಬು (fat) ಮತ್ತು 75 ಕ್ಯಾಲರೀಗಳು (calories))

ಮೊಟ್ಟೆ ៖ 1 ಔನ್ಸ್ — ಕರಿದ ಮೀನು ៖ 1 ಔನ್ಸ್
ಕುರು (ರಿಬ್ ರೋಸ್ಟ್, ಗ್ರೌಂಡ್) ៖ 1 ಔನ್ಸ್
ರಕೋಟಾ ಚೀಸ್ ៖ 1/4 ಅಳತೆ ಬಟ್ಟಲು — ಟೆಂಪೆ ៖1/4 ಅಳತೆಯ ಬಟ್ಟಲು ៖
ಸೋಯಾ ಹಾಲು ៖ 1ಅಳತೆಯ ಬಟ್ಟಲು — ಟೋಫು ៖ 4 ಔನ್ಸ್



ತುಂಬ ಕೊಬ್ಬಿನದು



(ಒಂದು ಪಾಲು : 7 ಗ್ರಾಂ ಪ್ರೋಟೀನ್ (protein), 8 ಗ್ರಾಂ ಕೊಬ್ಬು (fat) ಮತ್ತು 100 ಕ್ಯಾಲರಿಗಳು (calories)

ಚೀಸ್ (ಸಾಧಾರಣ) : 1 ಔನ್ಸ್ ಕೋಳಿ/ಟರ್ಕಿ ಹಾಟ್‌ಡಾಗ್ : (10/ಪೌಂಡ್)

ನೆಲಕಡಲೆಕಾಯಿ ಬೆಣ್ಣೆ : 1 ಔನ್ಸ್ (+1 ಕೊಬ್ಬು ಎಕ್ಸ್‌ಚೆಂಜ್)

ಸಾಸೇಜ್ : 1 ಔನ್ಸ್ 1% ಪನೀರ್ : 1 ಔನ್ಸು

3. ತರಕಾರಿಗಳು (ಕೊಬಿಬಲ್ಲದ್ದು)



(ಒಂದು ಪಾಲು : 2 ಗ್ರಾಂ ಪ್ರೋಟೀನ್ (protein), 5 ಗ್ರಾಂ ಕಾರ್ಬೋಹೈಡ್ರೇಟ್ (CHO) ಮತ್ತು 25 ಕ್ಯಾಲರಿಗಳು (calories)

ಹಸಿರು ತರಕಾರಿ : ಮೆಂತ್ಯದ ಸೊಪ್ಪು : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು ೦: ಹೆಸರಿ ಹುರುಳಿಕಾಯಿ : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು

ಕೋಸುಗಡ್ಡೆ, ಕಾಲಿಫ್ಲವರ್ : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು : ಕುಂಬಳಕಾಯಿ/ಸೋರೆಕಾಯಿ : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು

ಬದನೇಕಾಯಿ : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು : ಟೊಮ್ಯಾಟೊ : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು

ದೊಡ್ಡ ಮೆಣಸಿನಕಾಯಿ : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು : ಬಿಳಿ ಮೂಲಂಗಿ : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು

ನುಗ್ಗೆಕಾಯಿ, ಬೆಂಡೆಕಾಯಿ : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು : ತರಕಾರಿ ಸಲಾಡ್ : 1 ಅಳತೆಯ ಬಟ್ಟಲು

4. ಹಣ್ಣುಗಳು (ವಿವಿಧ ಅಳತಗಳಲ್ಲಿ)



(ಒಂದು ಪಾಲು : 15 ಗ್ರಾಂ ಕಾರ್ಬೋಹೈಡ್ರೇಟ್ (CHO) ಮತ್ತು 60 ಕ್ಯಾಲರಿಗಳು (calories)

ಬಾಳೆಹಣ್ಣು : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು ಸೇಬು, ಮೂಸಂಬಿ : 1 (ಚಿಕ್ಕದು)

ದೂಡ್ಡ ಪೇರ್ ಹಣ್ಣು : 1/2 ಕಲ್ಲಂಗಡಿ/ ಕರಬೂಜ : 1 ಅಳತೆಯ ಬಟ್ಟಲು

ಮಾವಿನಹಣ್ಣು : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು ಪೇರಳೆ : 1/2 ಅಳತೆಯ ಬಟ್ಟಲು

ಕ್ಯಾನ್ ಮಾಡಿದ ಹಣ್ಣು : 1/2 ಚಿಕ್ಕ ಕ್ಯಾನ್

5. ಹಾಲು ಮತ್ತಿತರ ಆಹಾರ

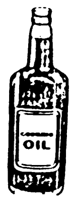


(ಒಂದು ಪಾಲು : 8 ಗ್ರಾಂ ಪ್ರೋಟೀನ್ (protein), 1-5 ಗ್ರಾಂ ಕೊಬ್ಬು (fat), 12 ಗ್ರಾಂ ಕಾರ್ಬೋಹೈಡ್ರೇಟ್ (CHO), ಮತ್ತು 90-150 ಕ್ಯಾಲರಿಗಳು (calories))

ಹಾಲು (ಕೊಬ್ಬಿಲ್ಲದ/ಸ್ವಲ್ಪಕೊಬ್ಬಿನ/ಪೂರ್ತಿಕೊಬ್ಬಿನ) : ಅಳತೆಯ ಬಟ್ಟೆಲು

ಮಜ್ಜಿಗೆ ಮತ್ತು ಮೊಸರು : 1 ಅಳತೆಯ ಬಟ್ಟಲು 1% ಪನೀರ್: 1 ಅಳತೆಯ ಬಟ್ಟಲು

6. ಎಣ್ಣೆ ಮತ್ತಿತರ ಕೊಬ್ಬಿನ ಪದಾರ್ಥಗಳು



(ಒಂದು ಪಾಲು : 5 ಗ್ರಾಂ ಕೊಬ್ಬು (fat) ಮತ್ತು 45 ಕ್ಯಾಲರಿಗಳು (calories)

ಅಡುಗೆ ಎಣ್ಣೆ : 1 ಚಮಚ : ತೆಂಗಿನಕಾಯಿ (ಹೆರೆದಿದ್ದು) : 2 ಟೇಬಲ್ ಚಮಚ

ಬೀಜಗಳು : 1 ಟೇಬಲ್ ಚಮಚ : ಮಾರ್ಜರಿನ್ / ವನಸ್ಪತಿ ತುಪ್ಪ : 1 ಟೇಬಲ್ ಚಮಚ

- ಸಾಧ್ಯವಾದಷ್ಟು ಅನ್‌ಸ್ಯಾಚುರೇಟೆಡ್ ಕೊಬ್ಬಿನ ಎಣ್ಣೆ (ಆಲಿವ್ ಎಣ್ಣೆ ತರಹದ್ದು) ಬಳಸಿ : ಸ್ಯಾಚುರೇಟೆಡ್ ಕೊಬ್ಬಿನ (ತುಪ್ಪ, ಬೆಣ್ಣೆಯಂತಹವು) ಬಳಿಕೆ ಕಡಿಮೆ ಮಾಡಿ. ಕರಿದ ತಿಂಡಿಯನು– ಆಗಾಗ ತಿನು–ವುದನು– ತಪ್ಪಿಸಿ.
- ಎಣ್ಣೆ, ಉಪ್ಪು, ಮತ್ತು ಸಕ್ಕರೆಯನು– ಆದಷ್ಟು ಕಡಿಮೆ ಬಳಸಿ.

Adapted from Exchange List for Meal Planning (1995) and the Ethnic Seies on the Indian - Pakistani Cuisine by American Diet Association and American Diabetes Association (1996); Modern Nutrition in Health & Disease, XII[th] Ed. Ed. By Shils, M.Olson, J.A. & Shike, M. Lea & Febiger Co. (1994)

ನನ– ಮಧುಮೇಹ (ಡಯಾಬೀಟಿಸ್) ಖಾಯಲೆಯನು– ಹತೋಟಿಯಲ್ಲಿಡಲು ನಾನೇನು ತಿನ–ಬೇಕು?

ದಿನಪ್ರತಿ ಆಹಾರದ ಬಳಕೆಯ ಯೋಜನೆಯ ಪಟ್ಟಿಯ ಮಾದರಿ

ಯೋಗ/ ವ್ಯಾಯಾಮ ಃ ಸಮಯ ಃ

ಇನಿ–ತರ ದೈನಿಕ ಕಾರ್ಯಕ್ರಮಗಳು ಃ ಸಮಯ ಃ

ಊಟ/ಆಹಾರ ಗುಂಪು	ಆಹಾರ/ ಅಳತೆ	ಕಾರ್ಬೋಹೈಡ್ರೇಟ್ (CHO)	ಪ್ರೋಟೀನ್ (protein)	ಕೊಬ್ಬು (fat)	ಕ್ಯಾಲರಿಗಳು (calories)
ಫಲಹಾರ					
ಮಧ್ಯಬೆಳಗಿನ ಫಲಹಾರ					
ಮಧ್ಯಾಹ–ದ ಊಟ					
ಸಂಜೆಯ ಉಪಹಾರ					
ರಾತ್ರಿಯ ಊಟ					
ರಾತ್ರಿಯ ಉಪಹಾರ					
ಎಲ್ಲಾ ಸೇರಿ					

ಅಳತೆಗಳು ಃ 8 ಔನ್ಸ್ = ಅಳತೆಯ ಬಟ್ಟಲು ; 3 ಟೀ ಚಮಚೆ = 1 ಟೇಬಲ್ ಚಮಚ ; 2 ಟೇಬಲ್ ಚಮಚ = 1 ಔನ್ಸ್

ತೂಕ ಃ 28-30 ಗ್ರಾಂ = 1 ಔನ್ಸ್

BY
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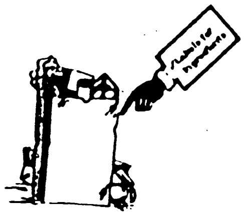
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నా మధు మేహపు చికిత్సకై నేను ఎలాంటి ఆహారమును భుజింపవలయును?

భారతీయ భాజన సూచనలు మరియు సలహాలు

(ˊ౦ వైద్యుడు లేదా డైటీషియన్ సలహా ప్రకారము అనుసరించవలయును)





- మనము భుజించు ఆహారములో పిండి పదార్థములు జీర్ణించిన పిదప శరీరములో గ్లూకోస్ (చక్కెర) ఉత్పత్తిఔతుంది. ఇట్టి గ్లూకోస్‌ను క్లోమగ్రంధి (ప్యాంక్రియాస్) నుండి డుదల అయ్యే ఇన్సులిన్ అను హార్మోన్ శరీర అవయవముల లోని ప్రతి జీవకణము నుయోగించుకొనుటకు మరియు తత్కారణంగానే ప్రసరించే రక్తమందు కూడ ఒక తగు మోతాదు (నార్మల్ రేంజ్) లో ఉంచటానికి ప్రధానంగా పనిచేస్తుంది. అట్టి ఇన్సులిన్ శరీరములో లోపించినప్పుడు గాని లేక జీవకణములు గ్లూకోస్ ను నియోగించు కొనుటలో ఇన్సులిన్ ప్రభావము తగ్గినప్పుడు గాని రక్తపు గ్లూకోస్ మొత్తము పెరిగి (హైపర్ గ్లైసే౦యా) మధు మేహవ్యాధికి దారి తీయును. కొన్ని సార్లు అట్టి రక్తపు గ్లూకోస్ మొత్తము తగ్గినప్పుడు హైపోగ్లైసే౦యా కు సంబంధించిన లక్షణములు ప్రభ పిల్ల వచ్చును.
- మధుమేహ వ్యాధి గ్రస్తులు ప్రతి దినము తమ రక్తపు గ్లూకోస్ ను అధుపులో పెట్టు కున్నచో కళ్ళు, రక్తలాళికలు, మూత్రపిండములు మొదలగు అవయవములందు ఆవ్యాధికి సంబంధించినట్టి సమస్యలను (కాంప్లికేషన్ లు) రాకుండా నివారించవచ్చును.
- ˊ౦ వైద్యుని సలహాప్రకారము సరియగు ఆహారము, దేహపరిశ్రమ, మరియు మందులతో పరిపూర్ణమగు మధుమేహపు చికిత్స మరియు రక్తపు గ్లూకోస్ ను అదుపులోనికి తీసుకుౌవటము సాధ్యమవును. ఆహార పానీయ నియమముల వరాలను ˊ౦రు 4వ పేజీలో గమనించవచ్చును.
- ˊ౦లో రక్తపు గ్లూకోస్ ˊ౦రు భుజించే ఆహారపు రకాలు మరియు మొత్తము ˊ౦ దేహపరిశ్రమ మరియు ˊ౦ శరీర బరువులు ˊటన్నింటపై ఆధారపడి ఉంటుంది. హెచ్చుగా తీపి మరియు పిండి పదార్థముల వాడుట వల్ల రక్తపు గ్లూకోస్ పెరుగుట మరియు అధికంగా నూనె మరియు క్రొవ్వు పదార్థముల వాడుకచే అనవసరంగా శరీరపు బరువు పెరుగుట జరిగి మధుమేహ వ్యాధి చికిత్స కష్ట సాధ్యముకాగలదు.
- రక్తపు గ్లూకోస్ లోని దినదిన మార్పులను, మరియు అనుదినము భుజించే ఆహార వరాలను దినచర్యగా (డైరీ) వ్రాసుకొని అనుసరించట వల్ల మధుమేహ చికిత్స సులభసాధ్యమగును.
- తమ వైద్యుని సలహా ప్రకారము మరియు ˊ౦యొక్క సాధారణ ఆరోగ్యము, వయస్సు శరీరపు బరువును అదుపులో పెట్టు కొనుట అత్యంత ముఖ్యము.
- ˊ౦రు గ్రహించే అన్నపానాదుల వరాలను ఆయా ప్యాకేజ్ లేబుల్స్ చది అవగహనము చేసుకొని అనుసరించుట కూడ ముఖ్యము. ఆహారమును తయారు చేసే ధములు.

వంట ˊయార చేయ్యట వరియ వండ పద్ధˊల





- నానా ధములగు పప్పులను, ధాన్యములను మరియు ముఖ్యంగా మొలక త్తనాలను గ్రహించుట వల్ల వాటిలోని పోషకాహార లువ పెరుగును.
- కూరగాయలను కొన్ని నీళ్ళలోనే ఉడికించవలయును మరియు అట్టి నీళ్ళను గాని అన్నము వండినట్టి నీళ్ళను గాని పారబోయకూడదు.
- అతిగా నూనె, క్రొవ్వు, ఉప్పు లేక తీపి పదార్థములను వాడకూడదు. అలాగే ఫాస్ట్ ఫ్రూడ్స్ కూడా వాడక పోవుట మంచిది.
- తగు మొత్తములలో మరియు సమకాలములలేనే భుజించవలయును. నీరు మరియు తీపిలేని పానీయములను తరచుగా వాడవచ్చును.

అధికంగా వంచి నీర వరియ ద్రవ పదార్థవల ˊగట

- శుభ్రమైన మంచినీళ్ళను కనీసం 6-8 గ్లాసులు (250 ౦.లీటర్లు) ప్రతినిత్యము త్రాగవలయును.
- ˊ౦ వైద్యుని సలహా ప్రకారము ౦తంగా అల్కహాల్ ను వాడవలయును తదితర ఆరోగ్య సూచనలు

ఆరోగ్యవన బాధించ విషయవల

- అనుదినము కనీసం 20 గ్రాముల ఫైబర్ (నార పదార్థము) ను వాడవలయును. ఈ ఫైబర్ ఆకుకూరలు, పండ్లు, పప్పులు మరియు గోధుమలాంటి ధాన్యములలో హెచ్చుగా ఉంటుంది.
- చాలా వరకు ఫాస్ట్ పుడ్స్‌లో క్రోవు, ఉప్పు మరియు తీపి పదార్థములు ఎక్కువ కాబట్టి ˊటిని నిషేదించుట మంచిది.
- రక్తపు పోటు ఎక్కువ (హైబీ పీ) గా ఉన్న వాళ్ళు ఉప్పును మరియు చిప్స్, పచ్చళ్ళు లాంటి ఉప్పు ఎక్కువ వున్న పదార్థములను వాడకూడదు.
- ట౦నులను వైద్యుని సలహాప్రకారము వాడండి.
- రక్తములో క్రొవ్వు పదార్థములను (కొలెస్టరాల్) తరచుగా పరీక్షించుకోవాలి.

మధుమేహ వ్యాధిని చికిత్స చేయవచ్చును! దానిని అదుపులోనికి తీసుకరావచ్చును! ˊ౦రు చేయగలరు!!

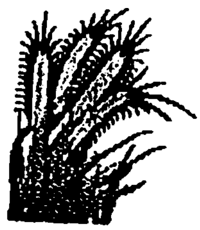
నా మధుమేహ చికిత్సహై నేను ఏ ం భుజింప వలయును?

పేరు :	నేటి తేది :					
క్యాలోరీస్/రోజుకు :	శరీర బరువు :					

నానా రకములు ఆహార పదార్థములను కలిపి తీసికోవట వల్ల సమ భోజనము అంటే బ్యాలెన్స్‌డ్ ీల్ కాగలదు. ీ వ్యక్తిగత జీవన పద్ధతి ప్రకారము ీరు ఆహారమును భుజించవలయును. ీ భోజన పథకమును ీరు ఎలాంటి ఆహార పదార్థములను ఎలాంటి మొత్తములో గ్రహించవలెనో చూచించును. ఈ క్రింది ఉదాహరణ ీకు ప్రతి భోజన సమయమునకు సుమారు మొత్తములను సూచించును.

1. ధాన్యములు, పప్పులు, పిండి పదార్థపు కూరగాయలు (నూనె లేకుండా)

(ఒక భాగము భోజనములో 15 గ్రాముల పిండి పదార్థము, 3 గ్రాముల మాంసకృత్తులు మరియు 80 క్యాలరీస్ లభించును)



బ్రెడ్ (గోధుమ గాని పలు ధాన్యపు గాని) :1ముక్క ఒక గోధుమ చపాతి : 6 వెడల్పు
(తెల్ల పిండి బ్రెడ్ వాడకుండటము మంచిది)

వరి అన్నము :1/3 కప్పు
(ముడి బియ్యము లేక దంపుడు బియ్యం మంచిది)
గోధుమ, మొక్కజొన్న, ఓట్స్, ఆలు గడ్డ : 1/2 కప్పు

మొక్క జొన్న పేలాలు : 3 కప్పులు
(ఉప్పు లేని)
అరటి కాయ/బఠాణీలు : 1/2 కప్పు

అ యలు : 1/2 కప్పు
అటుకులు : 1/2 కప్పు

సాంబారు : 1/2 కప్పు
పప్పులు/చిక్కుళ్ళు : 1/2 కప్పు (120 క్యాలరీస్)

నూడుస్స్ / రవ్వ : 1/2 కప్పు
1 ఇడ్లీ, 1/4 నాన్ (8"X 2")

బియ్యపు పిండి : 2 చెంచాలు
గోధుమపిండి : 21/2 చెంచాలు

2. మాంసము మరియు మాంసేతర పదార్థములు (కొవ్వు లేని)

(ఒకభాగములో 7 గ్రాముల ప్రోటీన్, 1 గ్రాము క్రొవ్వు మరియు 35 క్యాలరీలు లభించును)



కోడి/టర్కి మాంసము (చర్మము లేని తెల్ల మాంసము) : 1 ఔన్సు

చేప (ట్యున/ఫ్లౌండర్) : 1 ఔన్సు
క్రొవ్వు తక్కువైన చీజ్ : 1ఔన్సు

తెల్ల గ్రుడ్డు: 2
పప్పు* : 1/2 కప్పు (కప్పు)
(*15 గ్రాముల పిండి ఎదార్థము మరియు 120-క్యాలరీలు లభించును)

రొయ్యలు: 1ఔన్సు
క్రొవ్వు తక్కువైన టోపు : 3 ఔన్సులు

మాంసము మరియు మాంసేతర పదార్థములు (క్రొవ్వు తక్కువ)

(ఒక భాగములో 7 గ్రాముల ప్రోటీన్, 3 గ్రాముల క్రొవ్వు పదార్థము మరియు 55 క్యాలరీస్ లభించును)



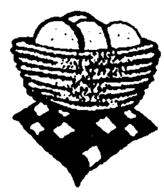
కోడి మాంసము, టర్కి మాంసము (చర్మము లేని ఎరుపు మాంసము) : ఔన్సు

ట్యున నూనెలో: 1 ఔన్సు లేత మటన్, బీఫ్ లేక పోర్క్ : 1ఔన్సు

మాములు కాటెజ్ చీజ్ : 1/4 కప్పు (క్రొవ్వు తక్కు చీజ్ 1 ఔన్సు

మాంసము మరియు మాంసేతర పదార్థములు (మొతాదు క్రొవ్వు)

(ఒక భాగములో 7 గ్రాముల ప్రోటీన్, 5 గ్రాముల క్రొవ్వు పదార్థము మరియు 75 క్యాలరీలు లభించును)



కోడి గ్రుడ్డు:ఒకటి
నూనెలో వేయించిన చేప: 1 ఔన్సు

రి కోట చీజ్ : 1/4 కప్పు
మటన్ (ఖీ మ/రిబ్ రోస్ట్) : 1 ఔన్సు

టోపు : 4 ఔన్సులు టెంఫే : 1/4 కప్పు
సోయాపాలు : 1 కప్పు

మాంసము మరియు మాంసేతర పదార్థములు (క్రొవ్వు ఎక్కు వైన



(ఒక భాగములో 7 గ్రా. ప్రోటీన్, 8 గ్రా. క్రొవ్వు పదార్థము మరియు 100 క్యాలరీస్)

రెగ్యులరా చీజ్ : 1 ఔన్సు
చికెన్/టర్కి హాట్ డాగ్ : 1 (పౌండుకు 10)
పీనట్ బట్టర్ : 1 ఔన్సు (+ఒక ప్యాట్ ఎక్స్ చేంజ్)
సాసేట్ : 1 ఔన్సు
1% పన్నీర్ : ఒక ఔన్సు

3. కూరగాయలు (నూనె/క్రొవ్వు లేని)



(ఒక భాగములో 5 గ్రా. పిండి పదార్థము. 2గ్రా. ప్రోటీన్ మరియు 25 క్యాలరీస్)

పచ్చని ఆకుకూరలు: చిక్కుడు 1/2 కప్పు
మెంతి కూర 1/2 కప్పు
క్యాబెజ్ గోబి:1/2 కప్పు బీర, సొర, పొట్ల, కాకరి : 1/2 కప్పు
వంకాయ: 1/2 కప్పు టమాట: 1/2 కప్పు ఎరుప (క్యాప్సికం) : 1/2 కప్పు
తెల్ల ముల్లంగి, చౌ-చౌ: 1/2 కప్పు, మునగ, బెండ: 1/2 కప్పు
సాలడ్ : 1/2 కప్పు

4. పండ్లు (భాగములు మారుచుండును)



(ఒక భాగములో 15 గ్రా. పిండి పదార్థములు, 60 క్యాలరీలు ఉండును).

అరటి పండు: 1/2 కప్పు
పెద్ద పేర్ : 1/2
మా ండి : 1/2 కప్పు
క్యాన్డ్ పండ్లు : 1/2 చిన్నడబ్బా
ఆపిల్/ కమలా పండు : 1 చిన్నది
ఖర్బూజ/ తర్బూజ: 1 కప్పు
జామ: 1/2 కప్పు

5. పాలు మరియు పాల పదార్థములు



(ఒక భాగములో 12 గ్రా. పిండి పదార్థము, 8 గ్రా. ప్రోటీన్, 1-5 గ్రా క్రొవ్వు పదార్థము మరియు 90-150 క్యాలరీస్ లభించును)

చిక్కటి పాలు/ చిలికిన పాలు/వెన్న తగ్గించిన పాలు: 1 కప్పు
చల్ల మరియు పెరుగు (చిక్కటి మరియు వెన్న తీసిన) : 1 కప్పు
1% పన్నీర్ : 1 ఔన్సు

6. నూనెలు మరియు క్రొవ్వు పదార్థములు



(ఒక్క భాగములో 5 గ్రా. క్రొవ్వు మరియు 45 క్యాలరీలు ఉండును)

వంట నూనె: 1 చాయ్ చెంచా, కొబ్బరి తురుము : 2 చెంచాలు
త్తనాలు/ ధాన్యములు : 1చెంచా మార్జరీన్ : 1 చాయ్ చెంచా

వెన్న నేతికి బదులుగా ఓలివ్ నూనె లాంటి ఆరోగ్యకరమగు నూనెలు, క్రొవ్వు పదార్థములను వాడవలయును. నూనెలు, క్రొవ్వు పదార్థములు, ఉప్పు మరియు తీపి పదార్థములను ేలైనంత తక్కువగా వాడవలయును.

(పై సూచనలు 1996 అమెరికన్ ఆహార సంస్థ మరియు అమెరికన్ డయబెటీస్ సంస్థ మరియు 1994 షిల్స్ తదితరులు గ్రంథకర్తలైన మొడర్న్ న్యూట్రిషన్ ఇన్ హీల్త్ అండ్ డిసీసెస్, 13వ ఎడిషన్ ల ఆధార పూర్వకమైన)

నా మధు మేహపు చికిత్సకై నేను ఎలాంటి ఆహారమును భుజింపవలయును?

భారతీయ భోజన సూచనలు మరియు సలహాలు

(ఁ వైద్యుడు లేదా డైటీషియన్ సలహా ప్రకారము అనుసరించవలయును)

వ్యక్తిగత భోజనపు ఉదాహరణ

యోగ ద్య/ వ్యాయామముః సమయ ము :

ఇతర దేహ పరిశ్రమలు ః ఎమయ ము :

భోజనము ఆహార రకము (గ్రా.)	భాగము	పిండి పదార్థములు (గ్రా.)	మాంసకృత్తులు (గ్రా.)	క్రొవ్వు పదార్థములు (గ్రా.)	క్యాలరీస్
ఉదయ భోజనం/నాష్ఠ					
మధ్యోదయ ఫలహారము					
మధ్యాహ్న బోజనం					
మధ్యాహ్న ఫలహారము					
రాత్రి భోజనము					
రాత్రి ఫలహారము					
మొత్తము					

1 ఔన్సు = 30 గ్రాములు, 1 కప్పు = 8 ఔన్సులు, 1 చెంచా = 3 చెంచాలు,
2 చెంచాలు = ఒక్క ఔన్సు, ఒక్క చెంచా = 15 ఎల్లీ లీటర్లు
ఒక చాయ్ చెంచా = 5 ఎల్లీ లీటర్లు

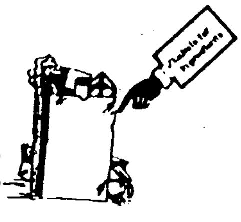
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Wahida Karmally, MS.RD.CDE
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எனது சர்க்கரை நோயைக் கட்டுப்படுத்துவதற்கு நான் என்னென்ன உண்ணலாம்?

ஆசிய-இந்திய சமையல் பற்றிய தகவல்களும், வழிகாட்டி நெறிமுறைகளும்

(தங்கள் மருத்துவர் மற்றும் உணவியல் வல்லுநரின் (Dietitian) அறிவுரைப்படி பயன்படுத்தப்பட வேண்டியது)



- சர்க்கரை நோய் என்பது, உங்கள் உடல் போதுமான இன்சுலின் உற்பத்தி செய்ய இயலாதபோது அல்லது இன்சுலின் முறையாக பயன்படுத்தப்படாமலிருக்கும்போது உண்டாகும் ஒரு நிலையாகும். நீங்கள் உட்கொள்ளும் உணவிலிருந்து உடைத்தெடுக்கப்பட்ட சர்க்கரையான குளுக்கோசிலிருந்து உங்கள் உடல் சக்தி பெறுவதற்கு இன்சுலின் உதவுகிறது. இன்சுலினுக்கும், இரத்தத்திலுள்ள குளுக்கோசுக்கும் இடையேயுள்ள அளவுகள் சரிவர இல்லாமல் இருக்குமானால், அது உங்கள் இரத்தத்தில் அதிக குளுக்கோஸ் (சர்க்கரை) அளவை (ஹைப்பர்-க்ளைசீமியா) அல்லது இரத்தத்தில் குறைந்த குளுக்கோஸ் (சர்க்கரை) அளவை (ஹைப்போகிளைசீமியா) ஏற்படுத்தலாம்.



- ஆராய்ச்சி மூலம் கண்டறிந்த அளவு விகிதப்படி இரத்தத்தில் சர்க்கரையை கட்டுப்பாட்டில் வைத்திருக்கவேண்டியது மிகவும் முக்கியமாகும். உங்கள் கண்கள், சிறுநீரகங்கள், இரத்தக் குழாய்கள் மற்றும் பிற உடலுறுப்புகளில் சிதைவு (சிக்கல்) ஏற்படாமல் தடுப்பதற்கு இது உதவமுடியும் என்பதை ஆராய்ச்சி நிரூபித்துக்காட்டியுள்ளது.
- உங்கள் மருத்துவரின் வழிகாட்டுதலின்படி மருத்துவ ஊட்டச்சத்துணவு சிகிச்சை மேற்கொள்வதன் வழியாக-அதாவது, ஒரு தனிநபர் உணவுத்திட்டம், (4ம் பக்கத்தைப் பார்க்கவும்) தேவையான உடற்பயிற்சி மற்றும் மருந்துகளை வைத்து சர்க்கரை நோயும், இரத்தத்தில் உள்ள சர்க்கரை அளவும் கட்டுப்படுத்தப்படும்.
- நீங்கள் உண்ணும் உணவு, மொத்த வெப்பக்கூறுகள் (கலோரிகள்), உங்கள் வேலை, வாழ்க்கை முறை மற்றும் உடல் எடை முதலியன உங்கள் இரத்தத்தில் சர்க்கரை அளவுகளை நிர்ணயிக்கின்றன. மாவுச்சத்துகள் அடங்கிய உணவுகள் இரத்தத்தில் சர்க்கரை அளவை அதிகரிக்கக்கூடும். கொழுப்புச்சத்து மற்றும் புரதம் நிறைந்த பண்டங்களை அளவுக்கு அதிகமாக உண்டாலும்கூட அது உடல் எடையை பாதிக்கும்.
- இரத்த அளவில் ஏற்படும் ஏற்ற இறக்கங்களை இன்னும் நன்றாகப் புரிந்துகொள்வதற்கு உங்கள் உணவு மற்றும் இரத்தத்தில் சர்க்கரை அளவுகளை அன்றாடம் பரிசோதித்து, குறித்து வைத்து கவனித்து வரவேண்டியது அவசியமாகும்.
- (உங்கள் மருத்துவரிடம் கலந்தாலோசித்த பின்பு) உங்கள் உணவுத்திட்ட முறையோடு சேர்த்து நாள்தோறும் உடற்பயிற்சி செய்யும் திட்டத்தையும் ஏற்படுத்திக்கொள்ளவும்.
- உங்களுக்கு ஏற்ற உணவுப் பொருட்கள் என்னென்ன என்பதையும் அவற்றில் உள்ள சத்துக்களின் விகிதங்களையும் நன்றாக அறிந்துகொள்ளுங்கள். உங்கள் உணவியல் வல்லுநர் இதில் உங்களுக்கு உதவுவார்.

உணவு தயாரிக்கும் மற்றும் சமைக்கும் முறைகள்:

- பயறுவகை தானியங்களை முளைக்கட்டி உண்டால் சத்து அதிகரிக்கும். வெவ்வேறு பயறுவகை தானியங்களை முளைக்கட்டுவது என்பது மிக இனிய வேலையுமாகும்.
- கொஞ்சம் தண்ணீரைப் பயன்படுத்தி காய்கறிகளை நீராவியில் வேகவைக்கவும். அரிசி அல்லது காய்கறிகளை சமைக்கும்போது கஞ்சி / வேகவைத்த தண்ணீரை வடிக்கவேண்டாம்.
- மிகவும் அதிகப்படியாக பதப்படுத்தப்பட்ட உணவு வகைகளை அல்லது கொழுப்பு நிறைந்த அதிக உப்பு நிறைந்த “துரித” உணவு வகைகளை குறைத்துக்கொள்ளவும் அல்லது தவிர்க்கவும்.
- ஒரேயடியாக அதிக உணவை உட்கொள்ளாமல், ஒரு சீரான இடைவெளிகளில் சிறிய அளவில் சத்தான உணவு வகைகளை உண்ணப் பழகவேண்டும்.



நிறைய தண்ணீர் மற்றும் பானங்கள் பருகவும்:



- 6 முதல் 8 டம்ளர்வரை தண்ணீர் / பானங்கள் என்பது ஒரு நாளுக்கு வழக்கமாக பரிந்துரைக்கப்படும் அளவாகும். சுத்தமான, சாதாரண தண்ணீர் சிறந்ததாகும். ‘காபின்’ என்ற விஷப்பொருள் அடங்கிய காபி, தேநீர் போன்ற பானங்களை அதிகமாகப் பருகுவதை தவிர்க்கவும்..
- தவிர்க்க முடியாத நிலையில், உங்கள் மருத்துவரிடம் கலந்தாலோசித்த பின்பே மது பானத்தை அருந்தவேண்டும்.

உடல்நலத்தைப் பாதிக்கும் வேறு சில அம்சங்கள்:

- அன்றாடம் குறைந்தது 20 கிராம் அளவு நார்ச்சத்து உடலில் சேரவேண்டும். தோலுடன் கூடிய முழு பயறு, தானிய வகைகள், அவரை வகைகள் மற்றும் பச்சைக் காய்கறிகள் நார்ச்சத்து நிறைந்தவைகளாகும்.
- பல ‘துரித’ உணவு வகைகள், அதிக கொழுப்பு, உப்பு மற்றும் / அல்லது சர்க்கரை நிறைந்தவையாய் உள்ளன. இதுபோன்ற உணவு வகைகளை அடிக்கடி பயன்படுத்துவதைக் குறைத்துக்கொள்ளவும் அல்லது தவிர்க்கவும்.
- உங்களுக்கு அதிக இரத்த அழுத்தம் இருக்குமானால், உப்பு பயன்படுத்துவதையும், வழக்கமான சிப்ஸ்கள் மற்றும் ஊறுகாய்கள் போன்ற உப்பு சேர்ந்த உணவுப் பொருட்களைப் பயன்படுத்துவதையும் குறைத்துக் கொள்ளவும்.
- பல வைட்டமின் சத்து மற்றும் கனிமச்சத்து மாத்திரைகள் மற்றும் டானிக்குகள் உட்கொள்வது குறித்து உங்கள் மருத்துவரிடம் கலந்து பேசவும். ஒவ்வாமை இருந்தால் இது கட்டாயம் செய்யவேண்டிய ஒன்றாகும்.
- இரத்தத்தில் கொழுப்பு அளவை தவறாமல் பரிசோதித்துப் பார்க்கவும்.

சர்க்கரை நோயைக் கட்டுப்படுத்த முயற்சி மேற்கொள்க! உங்களால் சாதிக்க முடியும்!!

எனது சர்க்கரை நோயைக் கட்டுப்படுத்துவதற்கு நான் என்னென்ன உண்ணலாம்?

பெயர் : இன்றைய தேதி :

கலோரிகள் / ஒரு நாளைக்கு : தற்போதைய எடை:

பல்வேறு ஆதாரங்களைச் சேர்ந்த உணவுப் பொருட்களை ஒன்றுசேர்த்து ஒரு சரிவிகித உணவைத் தயாரிக்கலாம். உங்கள் வாழ்க்கைமுறைக்கேற்றவாறு உங்கள் சொந்த உணவுத்திட்டம் அமைத்துக்கொள்ளப்படுதல் வேண்டும். ஒவ்வொரு வேளை உணவிலும் ஒவ்வொரு உணவுத்தொகுப்பின் பரிமாறல் அளவை உங்கள் உணவுத்திட்டம் யோசனை வழங்கும். பல்வேறு உணவுத் தொகுப்புகள் மற்றும் ஒவ்வொரு உணவுத் தொகுப்பிலும் வழங்கப்படக்கூடிய பரிமாறல் அளவின் எடுத்துக்காட்டுகள் பின்வருமாறு! (இந்த மதிப்பீடுகள் தோராயமானவை என்பதை கவனத்தில் கொள்ளவும்)

1. தானியங்கள்/பயறுகள்/மாவுச்சத்துள்ள காய்கறிகள் (கொழுப்போ அல்லது எண்ணெயோ சேர்க்கப்படாமல்)

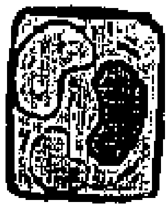
(1 பரிமாறல் (serving) உணவு, 15 கிராம் மாவுச்சத்து, 3 கிராம் புரதம் மற்றும் 80 கலோரிகளை அளிக்கிறது)



ரொட்டி : 1 துண்டு
அரிசி சோறு : 1/3 கோப்பை
சோளப்பொரி : 3 கோப்பை
அவியல் : 1/2 கோப்பை
சாம்பார் : 1/2 கோப்பை
சமைத்த நூடுல்ஸ்/ரவை: 1/2 கோப்பை
அரிசி மாவு : 2 மேசைக்கரண்டி
நெய்யுள்ள சப்பாத்தி : 1-6" அகலம்
கோதுமை, சோளம், ஓட்ஸ், உருளைக்கிழங்கு: 1/2 கோப்பை
வாழைக்காய் / பட்டாணி : 1/2 கோப்பை
அவல் : 1/2 கோப்பை
பயறு/தானியங்கள் : 1/2 கோப்பை (120 கலோரி)
இட்லி : 1 நான் ரொட்டி : ¼ 8" X 2"
கோதுமை மாவு : 2½ மேசைக்கரண்டி

2. மாமிசம் மற்றும் மாமிசத்திற்குப் பதிலான உணவுகள் -மிக மெல்லியது

(1 பரிமாறல் உணவு, 7 கிராம் புரதம், 0-1 கிராம் கொழுப்பு மற்றும் 35 கலோரிகளை வழங்குகிறது)



கோழிக்கறி, வான்கோழிக்கறி (தோலற்ற வெள்ளை மாமிசம்) : 1 அவுன்ஸ்
டூனா தண்ணீருடன்,
தட்டையான மீன் : 1 அவுன்ஸ்
முட்டையின் வெள்ளைக்கரு : 2
இறால் : 1 அவுன்ஸ்
குறைந்த கொழுப்பு தோபு : 3 அவுன்ஸ்
குறைந்த கொழுப்பு பால்கட்டி : 1 அவுன்ஸ்
வெந்த பருப்பு* : ½ கோப்பை

*(ஏறக்குறைய 15 கிராம் CHO (சர்க்கரைச் சத்தும்) 120 கலோரிகளையும் வழங்குகிறது)

மாமிசம் மற்றும் மாமிசத்திற்குப் பதிலான மாற்று உணவுகள்-மெல்லியது

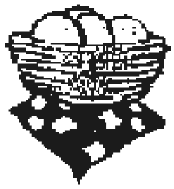
(1 பரிமாறல் உணவு, 7 கிராம் புரதம், 3 கிராம் கொழுப்புச் சத்து 55 கலோரிகளை அளிக்கிறது)



கோழி, வான்கோழிக்கறி (தோலற்ற மாமிசம்) : 1 அவுன்ஸ்
எண்ணெயில் பொரித்த மீன்: 1அவுன்ஸ்
மெல்லிய கொழுப்புள்ள ஆட்டுக்கறி, பன்றிக்கறி, மாட்டுக்கறி : 1 அவுன்ஸ்
காட்டேஜ் பாலாடைக் கட்டி : ¼ கோப்பை
3 கிராம் அல்லது அதற்கு குறைந்த கொழுப்புள்ள பாலாடைக்கட்டி : 1 அவுன்ஸ்

மாமிசம் மற்றும் மாமிசத்திற்குப் பதிலான மாற்று உணவுகள்-மிதமான கொழுப்புடன்

(1 பரிமாறல் உணவு, 7 கிராம் புரதம், 5 கிராம் கொழுப்புச் சத்து மற்றும் 75 கலோரிகளை அளிக்கிறது)



முட்டை : 1
ரிக்கோட்டா பாலாடைக்கட்டி : ¼ கோப்பை
தோபு : 4 அவுன்ஸ்
டெம்பெஹ் (Tempeh) (இந்தோனேசிய புரத உணவு) : ¼ கோப்பை
வறுத்த மீன் : 1 அவுன்ஸ்
ஆட்டு மாமிசம் (வறுத்த மார்பெலும்பு) : 1 அவுன்ஸ்
சோயா பால் : 1 கோப்பை

மாமிசம் மற்றும் மாமிசத்திற்குப் பதிலான மாற்று உணவுகள்-அதிக கொழுப்புடன்

(1 பரிமாறல் உணவு, 7 கிராம் புரதம், 8 கிராம் கொழுப்புச் சத்து மற்றும் 100 கலோரிகளை அளிக்கிறது)





சாதாரண பாலாடைக்கட்டி : 1 அவுன்ஸ்
நிலக்கடலை வெண்ணெய் : 1 அவுன்ஸ்
(+ ஒரு கொழுப்பு பதிலுணவு)
சாஸேஜ் : 1 அவுன்ஸ்

கோழி / வான்கோழிக் கறி ஹாட் டாக் : 1 (10/ lb)
1 % பன்னீர் : 1 அவுன்ஸ்

3, காய்கறிகள் (கொழுப்பு சேர்க்கப்படாதது)

(1 பரிமாறல் உணவு, 5 கிராம் சர்க்கரை மாவுச்சத்து, 2 கிராம் புரதம் மற்றும் 25 கலோரிகளை அளிக்கிறது)



பச்சைக்கீரை, வெந்தயக் கீரை : ½ கோப்பை
முட்டைக்கோஸ், காலிபிளவர் : ½ கோப்பை
கத்தரிக்காய் : ½ கோப்பை,
தக்காளி : ½ கோப்பை
முருங்கைக்காய்,
வெண்டைக்காய் : ½ கோப்பை
சேலட் (salat) : ½ கோப்பை

பச்சை அவரைக்காய் : ½ கோப்பை
சுரைக்காய் : ½ கோப்பை
குடமிளகாய் : ½ கோப்பை
வெள்ளை முள்ளங்கி, பெங்களூர் கத்தரிக்காய் : ½ கோப்பை

4, பழ வகைகள்: (பரிமாறல் அளவு மாறுபடும்)

(1 பரிமாறல் உணவு, 15 கிராம் சர்க்கரை மாவுச்சத்து, 60 கலோரிகளை அளிக்கிறது)



வாழைப்பழம் : ½ கோப்பை
பேரிக்காய் பெரியது : ½ கோப்பை
மாம்பழம் : ½ கோப்பை
டப்பாவில் அடைக்கப்பட்ட பழவகை : ½ கோப்பை

ஆப்பிள், ஆரஞ்சு : 1 (சிறியது)
தர்பூசணி : 1 கோப்பை
கொய்யாப்பழம் : ½ கோப்பை

5. பால் மற்றும் பால் பொருட்கள்

(1 பரிமாறல் உணவு, 12 கிராம் சர்க்கரை மாவுச்சத்து, 8 கிராம் புரதச் சத்து 1-5 கிராம் கொழுப்புச் சத்து, 90-150 கலோரிகளை அளிக்கிறது)



வெண்ணெய் எடுக்காத / வெண்ணெய் எடுத்த / குறைந்த கொழுப்புள்ள பால் : 1 கோப்பை
மோர் மற்றும் தயிர் (வெண்ணையற்ற அல்லது வெண்ணையுள்ளவை) : 1 அவுன்ஸ்
1% பன்னீர் : 1 அவுன்ஸ்

6. கொழுப்புகள் மற்றும் எண்ணெய்கள்

(1 பரிமாறல் உணவு, 5 கிராம் கொழுப்புச்சத்து மற்றும் 45 கலோரிகளை அளிக்கிறது)



சமையல் எண்ணெய் : 1 தேக்கரண்டி
முந்திரி, பாதாம் கொட்டைகள் அல்லது பருப்புகள் : 1 மேசைக்கரண்டி

தேங்காய் துருவல் : 2 மேசைக்கரண்டி
கொழுப்பற்ற வெண்ணெய் : 1 தேக்கரண்டி

* கொழுப்பு நிரம்பிய வெண்ணைய் மற்றும் நெய் போன்றவற்றிற்குப் பதிலாக கொழுப்பு இல்லாத ஆலிவ் எண்ணெய் போன்ற எண்ணெய்களைப் பயன்படுத்தப் பழகவும்.
* வறுத்த உணவு வகைகளை அடிக்கடி பயன்படுத்துவதைத் தவிர்க்கவும்.
* எண்ணெய்கள், உப்பு மற்றும் சர்க்கரை பயன்படுத்துவதைக் குறைத்துக்கொள்ளவும்.

அமெரிக்க உணவியல் சங்கம் மற்றும் அமெரிக்க நீரிழிவு நோய் பாதுகாப்பு சங்கத்தால் (1996) இந்திய-பாகிஸ்தானிய சமையல் முறை குறித்து தயாரிக்கப்பட்ட உணவுத்திட்டம் (1995) மற்றும் இனவழி கட்டுரைகளிலிருந்து எடுக்கப்பட்டது.

ஷில்ஸ், எம். ஓல்சன், J.A. & ஷிகா ஆகியோரால் எழுதி எம். லீ & ∴பெபிஜர் கம்பெனி நிறுவனத்தால் வெளியிடப்பட்ட மாடர்ன் நியூட்ரிஷன் இன் ஹெல்த் & டிசீசஸ் (1994) XIII[வது] பதிப்பு.

எனது சர்க்கரை நோயைக் கட்டுப்படுத்துவதற்கு நான் என்னென்ன உண்ணலாம்?

ஆசிய-இந்திய சமையல் முறை குறித்த தகவல்களும், வழிகாட்டி நெறிமுறைகளும்
(தங்கள் மருத்துவர் மற்றும் உணவியல் வல்லுநரின் அறிவுரைப்படி பயன்படுத்தவும்)

(உங்கள் மருத்துவர் மற்றும் உணவியல் வல்லுநரின் அறிவுரைக்கேற்ப செயல்படுத்த வேண்டிய ஒரு தனிநபர் உணவுத் திட்டத்திற்கான மாதிரிப் படிவம்)

யோகாசனம் / பயிற்சி : கால நேரம் :
மற்ற ஒழுங்குமுறைப் பயிற்சிகள் : கால நேரம் :

உணவு/எந்த வகை	அளவு	மாவு	புரதம் (கிராம்)	கொழுப்பு (கிராம்)	கலோரிகள் (கிராம்)
காலை உணவு					
முற்பகல் உணவு					
மதிய உணவு					
பிற்பகல் உணவு					
இரவு உணவு					
இரவுச் சிற்றுண்டி					
மொத்தம்					

CHO = கார்போஹைட்ரேட், gms = கிராம்கள் oz = அவுன்ஸ்,
tsp = தேநீர் கரண்டி, Tbsp = மேசைக்கரண்டி ckd = வேகவைத்த
28-30 கிராம் = 1 அவுன்ஸ், 8 அவுன்ஸ் = 1 கோப்பை

3 தேக்கரண்டி = 1 மேசைக்கரண்டி, 2 மேசைக்கரண்டி = 1 அவுன்ஸ்

Padmini Balagopal, MS.BEd., RD.CDE

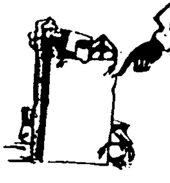
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ડાયાબેટીસ થયેલ વ્યક્તિથી શું ખાઈ શકાય?

ભારતીય ખોરાક માટે સૂચના

(તમારા ડોક્ટર તથા ડાયેટીશીયનની દેખરેખ નીચે વાપરવાની માહિતી તથા માર્ગદર્શન)



ડાયાબેટીસ અપૂરતા ઇન્સ્યુલીનના કારણે થાય છે. ઇન્સ્યુલીન આહારમાં લીધેલ શર્કરા (ખાંડ) માંથી શક્તિ ઉત્પન્ન કરવા માટે જરૂરી છે. આહારમાં લીધેલ સાકર અને શરીરમાં ઉત્પન્ન થતા ઇન્સ્યુલીન વચ્ચેની સમતુલા ન જળવાય તો લોહીમાં સાકરનું પ્રમાણ વધી જાય છે. જ્યારે લોહીમાં સાકરનું પ્રમાણ વધી જાય તેને હાઈપર ગ્લાઈસેમીઆ કહે છે અને ઘટી જાય તેને હાઈપો ગ્લાઈસેમીયા કહે છે.



રીસર્ચ દ્વારા જાણવા મળેછે કે કાળજીપૂર્વક લોહીમાં સાકરનું પ્રમાણ જાળવવાથી આંખ, કીડની, રક્તવાહિનીઓ, ઈત્યાદિ ઊપર થતી ડાયાબેટીસની માઠી અસર અટકાવી શકાય છે.

આ માટે તમારા ડોક્ટરની નજર હેઠળ ડાયાબેટીસ અને લોહીમાં સાકરનું પ્રમાણ ડાયેટીશીયનની સલાહથી, આહાર (ચોથા પાને), વ્યાયામ તથા ઔષધોની જરૂર રહે છે.

ખોરાકનો પ્રકાર (સ્ટાર્ચ, ચરબી), ટોટલ કેલરી, પ્રવૃત્તિ, તથા શરીરનું વજન સર્વે ઉપર લોહીમાંની સાકરનો આધાર છે.

કારનો હાયડ્રેર વાળો ખોરાક ખાવાથી લોહીમાં સાકર વધે છે, વધારે પ્રમાણમાં પ્રોટીન તથા ચરબીથી પણ વજન વધે છે.

લોહીમાં થતા સાકરના ફેરફારોને સારી રીતે જાણવા માટે દરરોજ લીધેલા ખોરાકની તેમજ લોહીમાંના સાકરના પ્રમાણની દૈનિક નોંધ રાખવી અત્યંત જરૂરી છે.

ડોક્ટરની સલાહ પ્રમાણે દરરોજ વ્યાયામ કરવો જરૂરી છે.

તૈયાર ખોરાકના પેકેટ અથવા ડબ્બાઓમાં શું શું છે તે જાણવા માટે તેના ઉપર લગાડેલા લેબલો વાંચવાની ટેવ પાડવી જરૂરી છે. આ બાબતમાં ડાયેટીશીયન જરૂરી મદદ કરી શકે છે.

ખોરાક યોગ્ય રીતે રાંધવાની રીત:

ફણગાવેલા જુદા જુદા કઠોળમાં પોષક તત્વો વધારે પ્રમાણમાં હોય છે.

શાકાભાજી થોડા પાણીમાં બાફવાના. બાફેલા શાકભાજી તથા ભાતમાંથી પાણી કાઢી ન નાખવુ.



રીફાઈન કરેલા નાસ્તા, વધારે મીઠાવાળો કે વધારે ચરબીવાળી (ઘી, તેલ) વાનગીઓ ઓછી ખાવાની અથવા તેનાથી દૂર રહેવાનું

થોડું થોડું દિવસમાં સમયસર ૫-૬ વખત ખાવું.

ચોખ્ખું પાણી અને પ્રવાહી વધારે લેવું ?



દરરોજ ૬-૮ ગ્લાસ સાદુ અને ચોખ્ખુ પાણી પીવું. પાણી સૌથી વધારે સારું. વધારે પ્રમાણમાં આ, કોફી તથા સોડાથી દૂર રહેવું.

દારુ ડોક્ટરની રજા હોય તો જ લેવો.

શરીરને અસર કરવાવાળી અન્ય બાબતો ?

દરરોજ ૨૦ ગ્રામ જેટલો રેસાવાળો ખોરાક (ફાઇબર) લેવો. આખું અનાજ, વટાણા ચણા, તથા શાકભાજી માંથી વધારે પ્રમાણમાં રેસા (ફાઇબર) મળે.

ઘણી તૈયાર વાનગીઓ (ફાસ્ટ ફુડ) માં ખાંડ, મીઠું તથા ચરબી વધારે પ્રમાણમાં હોય છે. આવી વાનગીઓથી દૂર રહેવું અથવા બહું નહીં ખાવું.

બ્લડ પ્રેસર વધારે રહેતું હોય તો મીઠું નહીં જેવું ખાવું. અથાણા, પાપડ અને બટાટાણી વેફરથી દૂર રહેવું.

કોઈ ખોરાક પ્રત્યે એલર્જી હોય તો વીટામીનની ગોળીઓ માટે તમારા ડોક્ટરને ખાસ પૂછવું.

ડાયાબેટીસ કાબૂમાં લઈ શકાય છે! કાબૂમાં લો ! તમે જરૂર તે કરી શ

ડયાબેટીસ થયેલ વ્યકિતથી શું ખાઈ શકાય?

(તમારા ડોકટર તથા ડાયેટીશીયનની દેખરેખ નીચે વાપરવાની માહિતી તથા માર્ગદર્શન)

નામ:	**આજની તારીખ :**						
એક દિવસમાં ખાવાની કૈલેરી:	**આજનું વજન :**						

સમતોલ આહારમાં નીચેના ઘટકોનો સમાવેશ થાય છે. તમારી રહેણી-કરણી પ્રમાણે, ડાયેટીશીયન પાસેથી સમજો કે સવારે. બપોરે અને સાંજે શું શું ખાવાનું વધા ઘટકોમાંથી થોડો થોડો આહાર લેવો. દરેક ઘટકમાંથી એક સર્વાંગનો દાખલો નીચે પ્રમાણે છે (નોંધ કરો દાખલા તરીકે):

૧.અનાજ/ચણા/વટાણા/સ્ટાર્ચી શાકભાજી (ઘી તથા તેલ વગર):



(૧ સર્વાંગ એટલે લગભગ ૧૫ ગ્રામ કાર્બોહાઇડ્રેટ, ૩ ગ્રામ પ્રોટીન, ૮૦ કેલેરી)

બ્રેડ : ૧ સ્લાઈસ
સુકી રોટલી : ૧-૬'' ગોળ
ભાત : ૧/૩ કપ
ઘઉ, મકાઈ, બટાટા : ૧/૨ કપ (ઓરસ)
પોપકાર્ન ૩ કપ
વટાણા, કાચા કેળા, ૧/૨ કપ
આવીયલ : ૧/૨ કપ
પૌંઆ : ૧/૨ કપ
સંભાર : ૧/૨ કપ
કઠોળ/દાળ : ૧/૨ કપ (૧૨૦ કેલેરી) શંધેલી કાંજી
અને સ્પગેટી ૧/૨ કપ
ઇડલી : ૧
નાન : ૧/૪ ૮''×૨''
ચોખાની લોટ : ૨ ચમચા
ઘઉનો લોટ : ૨-૧/૨ ચમચા

2.માંસ - ચરબી વિનાનું :



(૧ સર્વાંગ એટલે ૭ ગ્રામ પ્રોટીન, ૦-૧ ગ્રામ ચરબી અને ૩૫ કેલેરી)

ચીક્ન/ટર્કી (ચામડી વિનાનું સફેદ માંસ) : ૧ ઔંસ
ટુના (પાણીમાં) ફ્લાઇન્ડર માછલી : ૧ ઔંસ
લો ફેટ ચીજ-૧ ઔંસ
ઈંડાનો ફક્ત સફેદ ભાગ : ૨
દાળ* : ૧/૨ કપ (રાંધેલી)
શ્રીમ્પ : ૧ ઔંસ
(*૧૫ ગ્રામ કાર્બોહાઇડ્રેટ)
તોફુ (પનીર) લો ફેટ : ૩ ઔંસ
(અને લગભગ ૧૨૦ કેલેરી મળે છે.)

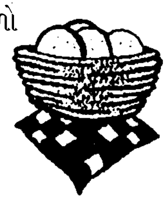
માંસ-થોડી ચરબીવાળું :



(૧ સર્વાંગ એટલે ૭ ગ્રામ પ્રોટીન, ૩ ગ્રામ ફેટ અને ૫૫ કેલેરી)

ચીક્ન-ટર્કી (ચામડી વિનાનું ડાઈ માંસ) : ૧ ઔંસ
ટના તેલમાં : ૧ ઔંસ
લેમ્બ, પોર્ક, બીરુ (ચરબી વગરનો)-૧ ઔંસ
કોટેજચીઝ : ૧/૪ કપ
ચીરુ-૩ ગ્રામ અથવા ઓછી-૧ ઔંસ ચરબીવાળો

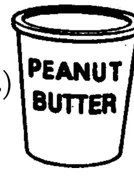
માંસ-મધ્યમ ચહબીવાળું :

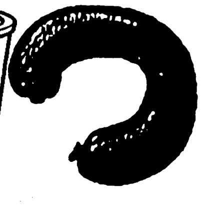


(૧ સર્વાંગ એટલે ૭ ગ્રામ પ્રોટીન, ૫ ગ્રામ ચરબી અને ૭૫ કેલેરી)

ઈંડું - ૧
તબેલી માંછલી : ૧ ઔંસ
રીકોટા ચીઝ- ૧/૪ કપ
લેમ્બ (રીખ રોસ્ટ, ગ્રાઉન્ડ)-૧ ઔંસ
તોફુ-૪ ઔંસ
ટૈમો-૧/૪ કપ
સોયાબીનનો દૂધ-૧ કપ

અતિશય ચરબી વાળું :





(૧ સર્વાંગ = ૭ ગ્રામ પ્રૌટીન, ૮ ગ્રામ ચરબી અને ૧૦૦ કેલેરી)

ચીઝ (રેગ્યુલર) : ૧ ઔંસ ચીકન/ટર્કી હોટ ડોગ ૧(૧૦ /પાઉન્ડ)

પીનટ બટર : ૧ ઔંસ (+૧ ચરબીનો એકસેન્જ)

સોસેજ: ૧ ઔંસ ૧% પનીર : ૧ ઔંસ

૩.શાક ભાજી (તેલ, ઘી વગરના)



(૧ સર્વાંગ = ૫ ગ્રામ કાર્બોહાઈડ્રેટ, ૨ ગ્રામ પ્રોટીન અને ૨૫ કેલેરી)

મેથીના ભાજી : ૧/૨ કપ વટાણા : ૧/૨ કપ

કોબી, ફલાવર : ૧/૨ કપ ગીસોબી : ૧/૨ કપ

રીંગણા : ૧/૨ કપ, ટમેટા : ૧/૨ કપ મોરા : ૧/૨ કપ

સફેદ મૂખા, સરગવાની શીંગ, ભીંડા : ૧/૨ કપ (યવયવ)



સેલડ : ૧&૨ કપ

૪.ફળ

(૧ સર્વાંગ = ૧૫ ગ્રામ કાર્બોહાઈડ્રેટ અને ૫૦ કેલેરી)

કેળાં : ૧/૨ કપ સફરજન, નારંગી : ૧ (નાના)

મોટું પેર : ૧/૨ કપ ચીલબો, કલીંગર : ૧ કપ

આંબો : ૧/૨ નાનો જામફળ : ૧/૨ કપ



કેન્ડ ફપ - ૧/૨ કપ (નાના)

૫.દૂધ, દહીં ઇત્યાદિ

(૧ સર્વાંગ = ૧૨ ગ્રામ કાર્બોહાઈડ્રેટ, ૮ ગ્રામ પ્રૌટીન, ૧-૫ ગ્રામ ચરબી અને ૯૦-૧૫૦ કેલેરી)

દૂધ (હોલ, સ્કીમ, લો ફેટ) : ૧ કપ છાશ, દહીં : ૧ કપ(રોન્ડ ઓર whole)

૧% પનીર : ૧ ઔંસ



૬.ચરબી, ઘી, તેલ

(૧ સર્વાંગ = ૫ ગ્રામ ચરબી અને ૨૫ કેલેરી)

તેલ-૧ ચમચી (છીણેલુ) કોપરું - ૨ ચમચા

કાજુ, આખરોટ વગેરે મેવો અને બીજ ચીભળાના વગેરેના-૧ ચમચો

માર્જેરીન : ૧ ચમચી (છીણેલુ)

**સેચ્યુરેટેડ ચરબી-માખણ અને ઘીના બદલે, અનસેચ્યુરેટેડ ચરબી ઓલીવનું તેલ વાપરવું વધારે હિતાવહ છે.*

નપેલી વાનગીએ અતીસય ન સેઘ.

**ઘી, મીઠું અને ખાંડ ઓછી વાપરો*

એડેપ્ટેડ ફ્રોમ એડસચેન્જ લીસ્ટ ફોર મીલ પ્લાનીંગ (૧૯૯૫) એન્ડ ધ એથનીક સીરીઝ ઓન ધ ઇન્ડીયન પાકીસ્તાની કુઝીન, બાય અમેરીકન ડાયેબેટીક અશોશીયેસન અને અમેરિકન ડાયાબેટીક એસોશીયેસન (૧૯૯૬); મોર્ડન ન્યુટ્રીશન ઇન હેલ્થ એન્ડ ડીસીસ, ૧૩મી એડીશન, ચેટીટેડ બાય સીલ્સ, એમ ઓલશન, જે.એ. એન્ડ શાઈક, એમલી. અને ફેબીગર કંપની (૧૯૯૪)

ડાયાબેટીસ થયેલ વ્યક્તિથી શું ખાઈ શકાય?

ભારતીય ખોરાક માટે સૂચના

(તમારા ડોક્ટર તથા ડાયેટીશીયનની દેખરેખ નીચે વાપરવાની માહિતી તથા માર્ગદર્શન)

ડોક્ટર્સ અને ડાયેટીશીયન દ્વારા આપની વ્યક્તિગત જરૂરીયાત
મુજબ બાવેલ આહાર પ્રોગ્રામ ફોર્મનો નમૂના

યોગ-વ્યાયામ (એકસરસાઈઝ): સમય:
દૈનિક કાર્યક્રમ : સમય:

ખોરાક	**કેટલું** (સર્વાંગ)	**કાર્બોહાઈડ્રેટ** (ગ્રામ)	**પ્રોટીન** (ગ્રામ)	**ચરબી** (ગ્રામ)	**કેલેરી**
સવારે					
નાસ્તો					
બપોરે					
નાસ્તો					
સાંજે					
નાસ્તો					

ટોટલ

૨૮-૩૦ ગ્રામ = ૧ ઔંસ; ૮ ઔંસ = ૧ કપ, ૩ ચમચી = ૧ ચમચો; ૨ ચમચા = ૧ ઔંસ

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Clinical Preventive Services for Normal-Risk Adults

Screening

Blood Pressure, Height and Weight: Periodically, 18 years and older.
Cholesterol:

Men, Every 5 years (and more frequently if at risk or abnormal), 35 years and older
Women, Every 5 years (and more frequently if at risk or abnormal), 45 years and older.

Diabetes: Periodically, adults with hypertension or hyperlipidemia.
Pap Smear: Women, Every 1 to 3 Years, 18-65 years.
Mammography: Every 1 to 2 Years, 40 years and older.
Colorectal cancer: Periodically, 50 years and older with Stool Guiac &/or sigmoidoscopy or colonoscopy.
Osteoporosis: Women, routinely, ≥ 65 years or ≥ 60 years at increased risk for fractures.
Alcohol Use: Periodically, 18 years and older.
Vision, Hearing: Periodically, 65 years and older.

PSA Screening: In Men Periodically

Immunization

Tetanus-Diphtheria (Td): Every 10 Years, 18 years and older.
Varicella (VZV): Susceptible only Two doses, 18 years and older.
Measles, Mumps, Rubella (MMR): Women of childbearing age-One dose, 18-50 years.
Pneumococcal: One dose, 65 years and older.
Influenza: Yearly, 50 years and older.

Chemoprevention

Discuss aspirin to prevent cardiovascular events:
Men, Periodically, 40 years and older.
Women, Periodically, 50 years and older.
Discuss breast cancer chemoprevention with women at high risk.

Counseling Calcium Intake: Women, Periodically, 18 years and older.
Folic Acid: Women of childbearing age, 18-50 years.
Tobacco cessation, drug and alcohol use, STDs and HIV, nutrition, physical activity, sun exposure, oral health, injury prevention, and poly-pharmacy: Periodically, ≥18 years.

Upper age limits should be individualized for each patient.

Weight

Normal body mass index (weight (kg)/height (sq. meters) for Indian Americans is <23
Waist circumference <90 cm or 36 inches (men); < 80 cm or 32 inches (women)

PUT PREVENTION INTO PRACTICE!!!

Diabetes

Numbers At-a-Glance†

(For Nonpregnant Adults)

Criteria for Diagnosis of Pre-diabetes

Impaired fasting glucose (IFG)	≥ 110 – < 126 mg/dl (Fasting plasma glucose)
Impaired glucose tolerance (IGT)	≥ 140 – < 200 mg/dl (2-hr 75g OGTT)

Criteria for Diagnosis of Diabetes

Random plasma glucose ≥ 200 mg/dl* with symptoms (polyuria, polydypsia, and unexplained weight loss)

Fasting plasma glucose ≥ 126 mg/dl*

2-hr plasma glucose ≥ 200 mg/dl* after 75g OGTT

**Repeat to confirm on subsequent day*

Treatment Goals for the ABCs of Diabetes††

A1C < 7 %

Preprandial plasma glucose 90 – 130 mg/dl
Peak postprandial plasma glucose < 180 mg/dl

Blood pressure (mmHg)

	Systolic		Diastolic
Hypertension definition	≥140	and/or	≥90
Treatment goal	<130	and	<80

Cholesterol – Lipid Profile (mg/dl)

LDL Cholesterol	< 100	
HDL Cholesterol	Men > 40	Women >50
Triglycerides	< 150	

† American Diabetes Association Clinical Practice Recommendations, *Diabetes Care 26* (Suppl.1): S33-S50, 2003.

†† NDEP promotes control of the ABCs of diabetes and use of the term A1C for Hemoglobin A_{1c}.

Diabetes
Management Schedule

At each regular diabetes visit:
- Measure weight and blood pressure.
- Inspect feet.
- Review self-monitoring glucose record.
- Review/adjust medications.
- Recommend regular use of aspirin for CVD prevention.
- Review self-management skills, dietary needs, and physical activity.
- Determine Medicare benefits eligibility for medical nutrition therapy and diabetes self-management education.
- Counsel on smoking cessation and alcohol use.

Twice a year:
- Obtain A1C in patients meeting treatment goals with stable glycemia (quarterly if not).
- Refer for dental exam.

Annually:
- Obtain fasting lipid profile (less often if normal).
- Obtain serum creatinine and urinalysis for protein and microalbumin.
- Refer for dilated eye exam.
- Perform comprehensive foot exam.
- Administer influenza vaccination.

Usually only once:
- Administer pneumococcal vaccination.

NATIONAL DIABETES EDUCATION PROGRAM

DEPARTMENT OF HEALTH & HUMAN SERVICES·USA

To order NDEP materials for your practice, call 1-800-438-5383 or visit our web site at
www.ndep.nih.gov

The National Diabetes Education Program (NDEP) is a partnership of the National Institutes of Health, the Centers for Disease Control and Prevention, and over 200 partner organizations.

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